

FILE DESCRIPTION

PHILADELPHIA FILE

SUBJECT HARRY GOLD

FILE NO. 65-4307

VOLUME NO. 1 BL

SERIALS 1

THRU

21

## NOTICE

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File No: 65-4307Re: Harry GoldDate: 5/78  
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
		Bulky Exhibit Inventory	1	1	
		Envelope containing 1B6	1	1	
		Envelope describing contents of 1B6(1)	1	1	
1B6(1)	5-23-50	2 photos and 7 negatives of Harry Gold, front & back w/ envelope	2	2	Negatives are same as pictures and will not copy
		Envelope describing contents of 1B6(2)	1	-	Refer to another Suit Agency
1B6(2)	5-25-50	Memo from another Suit Agency w/ copy	2 2	-	Refer to another Suit Agency
		Envelope describing contents of 1B6(3)	1	1	
1B6(3)	6-1-50	Report #2 + #3 (Photostat) on Recovery of 102 from FBI Head by Harry Gold Doc #1	5	5	
(3)	-	Continued Recovery Apparatus Doc #2	14	14	
(3)	-	Recovery of 102 from FBI Head Doc #3	15	15	
		Envelope describing contents of 1B6(4)	1	1	
1B6(4)	6-3-50	Notes on search of Harry Gold's residence	10	10	

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(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
		Envelope describing contents of 1B6(5)	1	1	
1B6(5)	6-3-50	Notes on search of Harry Gold's residence front back	1	1	
		Envelope describing contents of 1B6(6)	1	1	
1B6(6)	6-5-50	Notes made of names found in books during Gold's residence search	5	5	
		Envelope describing contents of 1B6(7)	1	1	
1B6(7)	6-5-50	Notes made of articles and place found in Gold's residence	3	3	
		Envelope describing contents of 1B6(8)	1	1	
1B6(8)	6-3-50	Notes on search of Harry Gold's residence	4	4	C
		Envelope describing contents of 1B6(9)	1	1	
1B6(9)	5-22-50	Receipt for items signed by Gold - (8 items)	1	1	
(9)		Travel Folder re: "Santa Fe Capital" #1	-	-	not copied
(9)		Per. R.R. Time Table #2	-	-	not copied



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(month/year)

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			Actual	Released	
(9)	5-22-50	Sheet of paper - tele - # ST8-3962 #3	1	1	
(9)	5-22-50	Small card - 1 side - mark WA 4776 - 2nd side year ST8-3962 - #4	1	1	
(9)	5-22-50	3 x 5 card - name & address of JH Bower #5	1	1	
(9)	5-22-50	3 x 5 card - name, address & tele # Blattman & Assoc. #6	1	1	
(9)	5-22-50	Locke Key # B219 #7	—	—	not copied
(9)	2-6-46	Letter w/envelope to Harry Gold from Pa. Alcohol & Chem. Corp. #8	2	2	
		Envelope describing contents of 1B6(10)	1	1	
1B6(10)	6-6-50	Notes taken during interview of Mrs. Lanning front & back	3	3	
		Envelope describing contents of 1B6(11)	1	1	
1B6(11)	6-5-50	Letter to SAC, PH, from Gold's attorney	2	2	
		Envelope describing contents of 1B6(12)	1	1	
1B6(12)	5-28-50	Photos of Yarboules & Adonias, front & back see sec 295	3	3	

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Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
		Envelope describing contents of 1B6(13)	1	1	
1B6(13)	5-29-50	Albany Photo List orig + copy	1	1	1 pg - dup
(13)	5-29-50	Photos exhibited to Gold front + back	10	10	
		Envelope describing contents of 1B6(14)	1	1	
1B6(14)	6-6-50	Photos of 712 Prochins front + back - see ser 298	1	1	
		Envelope describing contents of 1B6(15)	1	1	
1B6(15)	6-6-50	Photos of individuals investigated in Cohen case front + back	14	14	
		Envelope describing contents of 1B6(16)	1	1	
1B6(16)	6-7-50	Photostatic copy of signed statement by J. K. Fuchs	7	7	
		Envelope describing contents of 1B6(17)	1	1	
1B6(17)	5-31-50	U.S. v. Harry Gold - Court Report (Public)	18	18	
		Envelope describing contents of 1B6(18)	1	1	

File No: 65-4307Re: Harry Gold

REVIEWED BY \_\_\_\_\_

Date: 5/78  
(month/year)

Serial	Date	Description (Type of communication, to, from)	No. of Pages		Exemptions used or, to whom referred (Identify statute if (b)(3) cited)
			Actual	Released	
1B6(18)	5-22-50	Hand jury exhibit Signed confession of Harry Gold	10	10	
		Envelope describing contents of 1B6(19)	1	1	
1B6(19)	5-22-50	Interview log of Harry Gold front & back	4	4	
		Envelope describing contents of 1B6(20)	1	1	
1B6(20)	6-13-50	Photostat copy of Harry Gold's signature card front & back	1	1	
(20)	6-13-50	Photostat copies of Harry Gold's checking acct. ledger	4	4	
		Envelope describing contents of 1B6(21)	1	1	
1B6(21)	6-14-50	Photos of NYC re: Gold's meeting place with contacts	42	42	21 pgs - See Q

Retained 6/17/68

HARRY GOLD  
ESPIONAGE R  
65-4307

THIS MATERIAL IS LOCATED IN THE BULY EXHIBIT ROOM  
without light indicator

1. Seven negatives of Harry Gold and four photos with height indicator.
2. Memo dtd 5-25-50 re Harry Gold not believed to be identical with subject.
3. Photostatic copies of reports made by Harry Gold on recovery of CO from blue gas.
4. Notes of search 6823 Kindred St. Phila. Pa by SA Elwood A. Pett (10 pages).
5. Notes of search made at 6823 Kindred St Phila by SA Sullivan and R. Masters (one page).
6. Notes made of names observed in books etc during search of 6823 Kindred St Phila - art not taken.
7. Notes made of articles and places found - which were taken from residence at 6823 Kindred Phila, Pa on 6-3-50.

8. Notes of SA Fred C. Bickel re search residence of Harry Gold 6823 Kindred St. Phila on 6/3/50.

9. Receipt for items received during voluntary search of Gold's residence (the items are also contained in serial 2502-50 (Remains with a report serial 2502-50).

10. Notes taken by S.A. Helmer during interview with Mary Catherine Lanning on 2/4/50.

11. Ltr to SAC from John Attorney John Hamilton dtd June 1, 1950.

12. 512 photos which include photos of Joseph Antonovich Yakovlev and Jan Adamian (see serial 278).

13. 12 photos to be exhibited to Gold, rec'd from Albany with serial 296.

14. One photo each of Olga Balisovna Pradina and Vladimir Sergeevich Pradina (see serial 298).

15. Photos of individuals investigated in connection with the Sorby case (see serial 306).

16. Photostatic copy of seven-page signed statement by Julius K. Fuchs, May 26, 1950, London. (see serial 307).

17. Carbon copy of United States vs Harry Gold dtd at Phila, May 31, 1950, June 1, 1950.

18. Copy of signed confession of Harry Gold made Grand Jury Exhibit #1.

19. Interview log of Harry Gold May 22, 23, 1950 (sent NY 6/28/50) CS

20. Two photostatic copies each of subject's signature card & ledger card as subject's checking account at Provident Savings Bank & Trust Co, Cincinnati. (see serial 319).

21. 42 photos of offices in New York City where Gold had meetings with Fuchs and/or Sam & John (see serial 320).

Return 2/13/68  
CS

Return 5/3/67 CS

Return 11/11/58  
CS

Return 11/11/58  
CS

65-4307-1  
FBI - PHILADELPHIA  
JUN 6 1950

65-4307-1-B-6



Date Received 5/23/50

From PHOTOGRAPHY  
(Name of Contributor)

(Address of Contributor)

By ROBERT C. JENSEN  
(Name of Special Agent)

To Be Returned Yes ( ) No (X)

Description:

7 NEGATIVES OF HARRY GOLD  
(Taken with our Hecate Camera)  
4 Photos (with Hecate Camera)  
65-4307-1B-6(1)

65-4307-1-B-6(1)

No. \_\_\_\_\_

Name \_\_\_\_\_

Order \_\_\_\_\_

Remarks \_\_\_\_\_

Retouched \_\_\_\_\_

Order Finished \_\_\_\_\_

Reorder \_\_\_\_\_

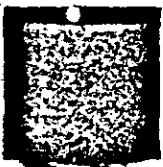
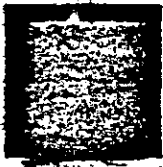
Reorder \_\_\_\_\_

65-4307-186(2)

ENCL

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ENCL. 6 (1)



6-1-50

Date Received 6-1-50

From Lincoln T. Ench

(Name of Contributor)

1422 Chestnut St.

Address of Contributor

By W. A. L. L. L.

(Name of Special Agent)

To Be Returned Yes ( ) No (X)

Description: Photostat copies of reports made by

Harry Gold on recovery of CIA from Fluor

1422 Chestnut St.

File No. 65-4302-18-63

## Report #2.

### Recovery of $\text{CO}_2$ from Flue Gas.

**Problem:** To determine on a comparative basis the rate of decomposition and the water evaporated from various carbonate bicarbonate solutions and sludges at  $100^\circ\text{C}$ .

**Summary:** The data obtained show that the system

is far superior to solutions of  $\text{KHCO}_3$  and  $\text{NaHCO}_3$ . However, the results should be checked using freshly precipitated  $\text{K}_2\text{CO}_3$  and  $\text{Na}_2\text{CO}_3$  which should also be run using the proportions as given by nature.

**Procedure:** Five gallons of each solution were poured into separate decomposition chambers at  $30^\circ\text{C}$  and dissociated with 5 lb. steam. This is equivalent to a temp. of  $100^\circ\text{C}$  in the steam chest and  $100^\circ\text{C}$  in the dissociation chamber. Samples were taken at 30 min. intervals for the first hour and then at two 30 min. periods. The water loss by evaporation was reduced before each sampling.

#### Discussion:

For convenience the various mixtures are referred to here by number. Their composition is given in the tables at the end of the report.

Practically all of the dissociation occurs in the first 30 min. after which only water is evaporated. Even at this point the loss is 3 gms.  $\text{H}_2\text{O}/\text{gm CO}_2$  and only 1% of the available  $\text{CO}_2$  has been evolved. But the end only 11 gms. of  $\text{CO}_2$  are liberated and the water evaporated has risen to 11.0 gms.  $\text{H}_2\text{O}/\text{gm CO}_2$ .

Mixture 2 behaves very much like 1. However, it contains 30% more available  $\text{CO}_2$  but is only able to evolve 39% of it as against 39% for 1. Some water evaporated in each case is so high as to make both solutions 1 and 2 entirely uneconomical.

Mixture 3 contains 30% more available  $\text{CO}_2$  than 1 and 150% more than 2. 75% of this  $\text{CO}_2$  is evolved, an amount about 250% greater than either 1 or 2. The water loss for 1 and 2 is 24% greater than that of 3. Some dissociation is fairly steady throughout hour 1. It is most rapid for the first 30 minutes.

Mixture 4 contains 30% more available  $\text{CO}_2$  than 1 and 200% more than 2. The total  $\text{CO}_2$  evolved is about 200% greater than 1 or 2 and represents 70% of the amount available. The water loss is about the same as for 3. At this point should be considered. It is clearly about half the time of 4. At this point only 2.2 gms.  $\text{H}_2\text{O}/\text{gm CO}_2$  have been evaporated. Since the time is halved the steam consumption will also be halved. The  $\text{CO}_2$  evolved is only 5% less than 4.

65-4309-1B-6(3)



Expt 5.

Comparison of dissociation rates

1. 1.000 g.  $K_2CO_3$  17.8 gms.  
 1.000 g.  $K_2CO_3$  15.8 gms.

Basis: 100 gms.  $H_2O$  and 100°C.

Time, min.	% $K_2CO_3$ conv.	Grms. $K_2CO_3$ produce.	Grms. $H_2O$ evaporated	Grms $H_2O$ / 100 Grms $K_2CO_3$	% $K_2CO_3$ Dissoc.
20	1.9	0.20	4.2	21	6
40	1.2	0.25	5.8	25	8
60	1.6	0.35	8.5	27	10
80	1.9	0.45	16.5	36	12
110	2.5	0.55	21.0	37	15

2. 1.000 g.  $K_2CO_3$  18.1 gms.  
 1.000 g.  $K_2CO_3$  10.9 gms. 104.5 gms.  $H_2O$  100°C.

Basis: 100 gms.  $H_2O$  and 100°C.

Time, min.	% $K_2CO_3$ conv.	Grms. $K_2CO_3$ produce.	Grms. $H_2O$ evaporated	Grms $H_2O$ / 100 Grms $K_2CO_3$	% $K_2CO_3$ Dissoc.
20	12.7	0.5	17.2	25.5	36
40	18.8	0.9	19.9	26.6	53
60	20.2	0.9	22.1	29.5	57
80	21.2	0.9	20.5	29.7	58
120	22.5	0.9	28.9	33	64

Encl 6(3)

# Report 73.

## Comparison of Dissociation Rates

$\text{H}_2\text{CO}_3$  38.2 gms  
 $\text{H}_2\text{CO}_3$  10.7 gms  
 $\text{H}_2\text{CO}_3$  33.0 gms

100 gms  $\text{H}_2\text{O}$  and 100 gms

Time	gms $\text{H}_2\text{CO}_3$	gms $\text{H}_2\text{CO}_3$	gms $\text{H}_2\text{O}$	gms $\text{H}_2\text{O}$	% of $\text{H}_2\text{CO}_3$ Dissoc.
20	22.4	21.2	25.0	28.0	28
40	20.5	20.1	24.5	27.5	45
60	21.6	20.2	25.2	28.5	54
80	22.1	20.1	26.5	29.0	62
120	28.7	27.5	26.5	28.4	66

## Calculation

100 gms  $\text{H}_2\text{O}$  and 100 gms

11.95 gms  $\text{H}_2\text{CO}_3$   
 10.397 gms  $\text{H}_2\text{CO}_3$

11.95

7.16

11.95 gms  $\text{H}_2\text{CO}_3$  / 3 gms.

39.8 gms / 3 gms.

11.95 gms  $\text{H}_2\text{CO}_3$

11.95 gms  $\text{H}_2\text{CO}_3$  / 100 gms  $\text{H}_2\text{O}$

100 gms  $\text{H}_2\text{O}$

100 gms  $\text{H}_2\text{O}$  and 100 gms

100 gms

2.19

100

2.19

100 gms  $\text{H}_2\text{CO}_3$  as  $\text{H}_2\text{CO}_3$

1.78

11.95 gms

10.397 gms

11.95 gms

10.397 gms

11.95 gms

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11.95 gms

10.397 gms

11.95 gms

10.397 gms

11.95 gms

10.397 gms

ENC (6)



# Report 73.

Dec 7 1942 CO<sub>2</sub> from lime base.

Problem: To determine on a comparative basis the rate of decomposition and the water evaporated from

1. Soln. 1

2. Soln. 2

3. Soln. 3

4. Soln. 4

5. Soln. 5

6. Soln. 6

7. Soln. 7

8. Soln. 8

9. Soln. 9

10. Soln. 10

11. Soln. 11

12. Soln. 12

13. Soln. 13

14. Soln. 14

15. Soln. 15

16. Soln. 16

17. Soln. 17

18. Soln. 18

19. Soln. 19

20. Soln. 20

21. Soln. 21

22. Soln. 22

23. Soln. 23

24. Soln. 24

25. Soln. 25

26. Soln. 26

27. Soln. 27

28. Soln. 28

29. Soln. 29

30. Soln. 30

31. Soln. 31

32. Soln. 32

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34. Soln. 34

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250. Soln. 250

251. Soln. 251

Note on CO Recovery, 2.

Data for a one-ton plant.

The information we have obtained thus far is more qualitative than quantitative due to the occurrence of unavoidably variable factors in the experiments. The following data was obtained before we can proceed with the design of the one-ton plant.

1. Delivery rate of carbonation run, using:

- 1. 22 lbs.  $\text{CaCO}_3$  / 100 lbs.  $\text{H}_2\text{O}$
- 2. Gas flow of 200 c.f.m.
- 3. Carbonation temp. of  $46^\circ\text{C}$ .

From 1 is the point to which it is feasible to carry the carbonation should be very carefully determined as this point fixes both the manner of carbonation and the composition of the dissociation mixture. This question is more completely discussed in Note #1.

2. Decomposition data at 200, 165, and 110 C. and at 45 and 35 lbs. of freshly added  $\text{CaCO}_3$ . This information is essential in order to obtain a heat balance which in turn determines the form and size of the apparatus and the manner of dissociation.

3. The determination of heats of reaction will enable us to obtain a material balance, without which we cannot begin the design of the equipment.

Witnesses:

Joseph R. Brown  
Wm. C. Knicker



## Continuous Recovery Apparatus

### Foreword:

The work was undertaken to determine the most suitable method and form of apparatus for the recovery of CO<sub>2</sub> from flue gas. Preliminary work on absorption in an Na<sub>2</sub>CO<sub>3</sub> solution, and using the rectangular unit had given excellent results; with an average entrance gas of 15.0% CO<sub>2</sub>, the exit value was 3.0% CO<sub>2</sub>. The reversal of the process by dissociation of the system

was found to be far better (500-1000%) than any other known method.

The next step then was to investigate the feasibility of continuous operation on a pilot plant scale with the purpose in mind of constructing a 10 ton per day unit. It was decided to use the rectangular absorber, which had shown itself capable of removing 8 to 10 lbs. of CO<sub>2</sub> per hr. from the flue gas, and to build the rest of the apparatus around it. The sketches which follow here are a record of the work which was done, or more properly, of the progress which was made, as can be seen by contrasting the diagrams of Run Nos. 1 and 5. These schematic representations, incidentally, try to give as nearly as possible in a single plane a complete picture of the apparatus as it was at the beginning of each run, even down to the very fittings used, in order to maintain the simplicity of the presentation has the actual position or makeup of any of the lines been changed. A consecutive numbering system is employed to identify each piece of equipment, either new or old, in the written description.

### Run #1 - Description of Unit

#### 1 - Flue Gas Drawing

The flue gas was taken from either of the two stacks and entered the system through the line 1 and into the distributor at the first packed tower. It then passed in series through each of the other towers 2, 3 and 4. The first three towers were supplied with cooling water from the system as 7 but tower 5 from a main pump 6 was placed at the bottom of the tower to prevent the heat particles from damaging the casing and smaller. The trap 10 for the trap water was included and the line 11 from trap 10 to the second line 12 which acted as a seal; it had previously been shown that the water had to be kept running continually to remove the heat of compression. The water tank 13 was also installed and the gas passed through it and then through the scrubber 14 and into the absorber. A valve 15 was provided so that samples could be taken of the exit gas for analysis.

#### 2 - Absorption

The rectangular absorber 16 was used but was altered by the addition of baffles 17 and 18 were bolted against the side of the absorber and the gas distribution 19 was set as shown.

The baffled section 20 was added on top of the absorber to prevent entrainment.

The first glass 21 was connected and the gas then to the second glass 22 over the absorber.

## Run 1 - Description of Unit - contd.

The rate of flow was to be measured after exit by the meter 22. The trap 23 was used to collect any gas which might be taken of the exit line for analysis.

**Material Transfer (Slurry)** - The slurry was to settle in the section 25 and then be taken off continuously by the percolator 26 into the glass funnel 27 and then thru the generator 28 into the pump tank 29. When the 12.5% slurry was to be transferred by the small centrifugal pump 30 the line 31 was to be closed by the stop valve 32 and into the scrubber. After treatment, the slurry was to pass into the receiver by means of the line 33 containing the sight glass 34.

**Disassociation** - A disassociation apparatus (which had originally been built for an absorption unit) was set up with 3 chambers to each section - and counted as follows: the nitrogen, one part for the decomposer 35 and the other for the scrubber 36.

**Material Transfer** - The strong live was to be taken off into the hot water jacket and then to overflow continuously to the glass bottle 38 which was to be used as a supply tank for the burner. The liquid was then to go thru the line 39 to the storage tanks 41 and 42. A sight bottle 43 was provided so that the pressure of the original live for absorption could be observed.

**Scrubbing and Cooling** - The recovered gas was first to pass along the line 44 and into the scrubber to give up most of its heat and water to the incoming slurry. Some  $CO_2$  was to be cooled and scrubbed with water in the hot packed tower 45 and then measured in the generator 46.

## Record of Run

**Live Gas Washing** - After several hours of running the towers 3, 4 and 5 seemed to be plugged up as more of the wash water ran out of them. The cause of this was determined to be the pressure drop in the towers creating a pressure inside which was less than atmospheric. This was rectified by putting in the equalizer lines 47, 48, and 49 which were connected to the bottles 50, 51 and 52 and the washing lines 53, 54 and 55 were run into the stand pipe 12. Thus the water flowed at all times and could easily be regulated.

**Absorption** - The technical measures were not that the flanged sections and connections in the absorber; this continually caused trouble and time for the conditions were difficult.

**Distillation** - The distillation was maintained at 200 to 225  $^{\circ}C$ . Some difficulty was observed because of the slipping of the pint valve and the smothering of the flame in the absorber.

**Distillation** - The baffled section 20 for absorber was all right.

**Distillation** - The total amount of the gas was about 1.25.



1.  $\text{Na}_2\text{CO}_3$  This was distributed as

Na <sub>2</sub> CO <sub>3</sub>	12.0 grms.	+ 17 grms Na <sub>2</sub> CO <sub>3</sub> ppt.
NaHCO <sub>3</sub>	10.0 grms	

but analyses were only made for the first 5 hrs. of the run.

#### 2. Gas analyses -

Entrance	23.5%
Exit	23.0%
Rate of flow	250 c.c./hr.

These figures average about 25 lbs. of  $\text{CO}_2$  per hr. Since the inlet gas was very variable, due to the use of an artificial mixture of air and  $\text{CO}_2$ , not many tests could be made.

#### 3. Material transfer (Slurry)

It was impossible to regulate the flow with the screw valve 25. Also, the glass funnel 27 had to be continually replaced as it kept cracking. The deaerator 28 clogged badly. Good settling could not be obtained in the slurry tank 29 as the pump shaft constantly packed with slurry.

4. Dissociation of mechanical - The stuffing boxes leaked badly as the packing was eaten away by the alkali due to the oil being saponified and emulsified.

Chemical	200
Dissociation Temp.	104° C
Steam pressure	147 lbs.

Some analysis was made on the slurry and gave

Na <sub>2</sub> CO <sub>3</sub>	12.0 grms.	+ 17 grms NaHCO <sub>3</sub> ppt.
NaHCO <sub>3</sub>	10.0 grms	

Clear second liquid showed	12.0 grms.
Na <sub>2</sub> CO <sub>3</sub>	6.0 grms

#### 5. Material transfer (Clear liquid)

The heat exchanger 27 never worked - it either clogged with alkali crystals or became air bound. The glass bottle 29 did not stand up well under the heat and the pump 29 would not lift the liquid to the storage tank 41.

#### 6. $\text{CO}_2$ Scrubbing and Cooling

Practically no gas could be obtained thru the scrubber and finally the decomposer was connected directly to the cooling tower 45 and when the gasometer 46 was filled 3 times the odor of the  $\text{CO}_2$  was very sharp.

Summary - The whole system was run for 25 hrs. with a shutdown of 5 hrs. The entire system was tried on and considerable difficulty was experienced in attempting continuous operation. The absorption was also variable due to the use of artificial air. There were many mechanical defects and deficiencies in the unit which interfered with its steady functioning.





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## Continuous Recovery Apparatus Run 72.

### 1. Gas Washing

The towers were thoroughly cleaned and new series installed. The gas was then washed in the absorber according to the pressure on the discharge side of the pump. The light line 55 was fitted to the trap 10 so that the level of the water above the pump could always be observed.

2. Absorption as mechanical (1) changes - (a) a deodorizer line 55 was put in place of the section 55. (b) a light line 21 was eliminated and another 57 was fixed as shown in a more convenient location on the absorber.

(2) The gas was very little due to catching with ether and glycerine but small scale changes would have avoided all this.

(3) Oxidation - 2.5 g. per hr. (b) chemical (1) Concentration - kept at 25 gms. of total alkali as  $\text{Na}_2\text{CO}_3$ . The quantity of  $\text{Na}_2\text{CO}_3$  ppt. varied and once went up as high as 17 gms. No samples could be taken for the last 21 hrs. of the run as the valves were stuck.

### (2) Gas Analyses

(a) Entrance - 12.5%  $\text{CO}_2$   
(b) Exit - 2.0%  $\text{CO}_2$   
(c) Rate of flow - 650 c.f.f.h.

When calculated these values give an absorption of 3.5 lbs.  $\text{CO}_2$  per hr. Part of the trouble was discovered to be the result of the by-passing of part of the gas thru the light line 57 before it had passed thru the entire column of liquid. This mixing of the gas with gas with one of a higher  $\text{CO}_2$  content may somewhat account for the poor absorption.

### 3. Material transfer (Slurry)

The weak slurry was run from the bottom of the absorber thru a series of fittings 58 and a light glass 59 to the pump 30. The cone of the slurry was the pump link 31. The gas entered the pump then passed up the line 32 which was fitted to the continuous wetting apparatus 71. This was constructed of a slurry of gum and the cone 56 and was placed above the absorber so that the slurry could be run by gravity thru the line 72 containing the light glass 73 and 74 and into the absorber. The weak slurry was to be taken off by the line 74. In operation trouble was encountered by the slurry clogging in the line 74. This was due primarily to the poor absorption - not sufficient direct flow was provided for the flow.

4. Description - Some trouble was still met with the train for the starting pump.

(1) Chemical (1) Discharge from 265 c. (2) Temperature - 70° (3) Absorption pressure - 3.75 lbs. per sq. in.

### 5. Material transfer (Slurry) (cont.)

The slurry was to pass from the 74 into the absorber. The line 76 was run from the pump to the light glass 77 on the side of the absorber. The valve 78 was installed so that the flow could be controlled. The line was also to be taken from

ENCL 4/31



The lines 59, thru the bottle 29 and then joined with that from 77 by the inter-  
al 60. This combined line then ran in the line 81 to the coil 101 on the  
new heat exchanger 45. The strong live gas to be partly diluted by a. The  
lines 64 were connected from the bottles 77 and 75 to each other and then  
passed to the vent line 84 through the heat exchanger. The pressure in the main  
line 33 was also relieved by means of the line 66. The bottle 64 was added to  
the line 40 by the ant over line 72. The purpose was to be able to divert any of  
the strong live directly into the absorber without further dilution in the storage  
tanks; it was to accomplish this that the valve in gas added at the vent of line  
40.  
This all worked well except for (a) slurry from the scrubber stopped up the  
line 73. (b) the strong live solidified badly in the line 40.

#### CO<sub>2</sub> Scrubbing and Cooling

An effort was made to maintain the temp. in the  
scrubber at 80.3 but it varied at times between 50 and 95. It was at this  
higher temp. that the evolution of CO<sub>2</sub> was most rapid. It is possible that at  
the lower temp. much of the CO<sub>2</sub> is re-absorbed when it is considered that there  
is an excellent driving force of a high concn. of CO<sub>2</sub>. The cooling tower 45  
was provided with a pump 69 and was re-packed with Heschig rings in place of the  
coke. No trouble was encountered.

The CO<sub>2</sub> production was intermittent, mostly due to the clogging of the  
slurry in the bottle. For in this case the scrubber had to be temporarily open-  
ed to the atmosphere before the system could be started flowing again. Taking  
the periods of uninterrupted operation, the maximum amount of gas produced was  
about 3 lbs. per hr.

#### Summary:

A start was made toward eliminating the difficulties of material trans-  
fer by the introduction of a settler for concentrating the slurry and removing  
the weak lye. The absorption was very poor but one of the sources of trouble -  
the faulty location of a sight glass - was discovered.

A system of gas pressure equalizers was also installed between the  
scrubber and absorber and worked well.

Continued operation has still very difficult but many of the sources  
of the stoppages and break downs have been found. The length of the run, 14 1/2  
hours, is the longest thus far attained, and while many shutdowns occurred, two  
full days of operation are an encouraging sign.

### 1. Fine Gas Washing

The line 90 was run from the side of the chamber 90 to the tank 91. The trap in the filter-off tank 91, and the catch-wire were all cut out of the system and the return line 91 was connected directly back into the absorber. By using the slurry for a scrub liquid instead of water, it was thought that considerable secondary absorption would thus be obtained. However, when the slurry pooled slightly the lines 90 and 91 in the distal chamber after this had occurred, forced air at the original back pressure, after 15 to 20 min. ceased.

Several charges of soot were over into the towers and the line 90 toward the end of the run. In the last occasion the fine gas line was completely plugged out and no further trouble should be had in the next run. Three air readings on the towers were taken only at the beginning of the run as the charging of slurry in the lines 90 and 91 and the blocking of the fine gas lines with soot caused the manometers to blow out continually.

### 2. Absorption

(a) Mechanical (1) Changes - (a) the sight glass 57 was raised 92 so that no gas could be by-passed before it had gone thru the entire height of the absorbing column. (2) Leaks - negligible, but the absorber had a bad appearance due to the many patches made. (3) Distortion - 2.5 r.p.m. (b) Chemical (1) Concentration - average about 25 gms. total alkali as  $\text{Na}_2\text{CO}_3$  and the  $\text{NaHCO}_3$  opt. was about 7 gms. However, there are large gaps of from 3 to 4 hrs. in which no samples were taken and for the last 12 hrs. of the run not a single test could be made as all efforts had to be directed toward running operation. The alkali lines repeatedly flooding one after the other and the already mentioned trouble with the fine gas lines also occurred. (2) Gas Analyses - (a) Entrance - 35.4%  $\text{CO}_2$  (b) Exit - 26.5%  $\text{CO}_2$  (c) Rate of flow - 500 c.f.m. per hr. represents an absorption of 8.2 lbs.  $\text{CO}_2$  per hr. The other values recorded have no significance as the  $\text{CO}_2$  content of the entering gas was too low (9.0%) or else the rate of flow (160 c.f.m.) was far below the rated rate of 500 c.f.m.

### 3. Apparatus Order (Slurry)

The bottle 91 was used as before but lateral 93 was introduced between the bottle 91 and the exit of the cone so that any clogging could be removed by hand. In operation, however, this did not correct the problem and the bottle 91 and the parts were not altered. The slurry collection is the bottle in the bottom of the flask connecting to the absorber. It was a laboratory flask to get the waves so that the gas to the absorber could be at the proper rate of 1.5 to 2.0 c.f.m.

### 4. Absorption

(a) Mechanical (1) Changes - (a) the sight glass 57 was used in the 90 c.f.m. rate of flow of 1.5 c.f.m. was used. (b) Chemical (1) Concentration - average about 25 gms. total alkali as  $\text{Na}_2\text{CO}_3$  and the  $\text{NaHCO}_3$  opt. was about 7 gms. However, there are large gaps of from 3 to 4 hrs. in which no samples were taken and for the last 12 hrs. of the run not a single test could be made as all efforts had to be directed toward running operation. The alkali lines repeatedly flooding one after the other and the already mentioned trouble with the fine gas lines also occurred. (2) Gas Analyses - (a) Entrance - 35.4%  $\text{CO}_2$  (b) Exit - 26.5%  $\text{CO}_2$  (c) Rate of flow - 500 c.f.m. per hr. represents an absorption of 8.2 lbs.  $\text{CO}_2$  per hr. The other values recorded have no significance as the  $\text{CO}_2$  content of the entering gas was too low (9.0%) or else the rate of flow (160 c.f.m.) was far below the rated rate of 500 c.f.m.



Run 4, cont'd.

#### 4. Material transfer (clear 11:45)

The only changes made were that the 20 and 30 were installed in the 20 and 30 seal 75 ft. below the main tank and should be changed to 20 and 30 ft. in the main tank in the strong live set at 20 ft. below the main tank to clear solid.

#### 5. CO<sub>2</sub> scrubbing and cooling.

The production of CO<sub>2</sub> was very erratic and had gradually risen to 3 lbs. per hr. when the trouble developed all over the system. First with the slurry in the main tank, then with set in 20 ft. gas lines and the inevitable clogging of the strong live when the flow was stopped but even these did not force a shutdown in the collection of the evolved CO<sub>2</sub>. The trouble levelled when water was turned on the scrubber in an attempt to cool it down to 50°C. the scrubber operation was not with the result that solidification of the slurry occurred. It is also quite possible that at this low temp. and with the high concentration of CO<sub>2</sub> coming from the decomposer, that practically all of the gas is re-absorbed by the alkali solution. However, the gas had been collected for a 10 hr. period, showing that it could be done.

After the 10 hr. stoppage, the evolution of CO<sub>2</sub> was again resumed and rose to 5 lbs. per hr. where, again, it should be noticed that the scrubber was at 80°C.

#### Run 7

The operation of the absorber was very intermittent because of the clogging of slurry in the main tank and the choking of the gas lines with soot. The cause of these hindrances and also of the crystallization of the strong live in the lines have been discussed and should be eliminated on the next run. What results could be obtained very low absorption.

From the first the most serious problem in the production of CO<sub>2</sub> took place immediately and was a period of time, showing that the operation was possible. The only reason for the stoppage was the crystallization of the strong live in the lines and the clogging of the gas lines with soot.

## Continuous Recovery Apparatus Run 25

### 1. Run Conditions

The run was made at a lower water level than the previous one. The gas flow in Run 24, however, the water in the manometer was not continuously in the readings could be made; evidently some other liquid will have to be used.

2. Absorption by Mechanical (1) Charges—(a) The line 56 was run from the manometer to the front of the absorber as indicated; a 100 cc glass was included. The purpose of this was to take any gas which might be trapped underneath the orifice 17 and 18 and pass it into the unit so that the liquid might get a chance to break it up into the fine bubbles necessary for a good absorption.

(2) Leakage—very slight.

(3) Activation—245 cc. for the first 9 hrs.

of the run the concentration was checked for the rest of the line the level was at the normal rate of 220 cc.

(4) Chemical—(a) Concentration—after about 15 hrs. of operation it was found that the total alkalinity had dropped to 18 gms. and continued for 8 hrs. more, with the concentration reaching a low of 18 gms., where the situation was remedied by the addition of 10 gms. of a 20% solution, containing 30 gms. of NaOH. Unfortunately the stop glass in the line 56 was broken shortly thereafter and no further samples could be taken as more than 30 gms. of NaOH were lost. This accident occurred in the 35th hr. of the run.

(2) Gas Analysis—(a) Entrance, 9.2—21.4% CO<sub>2</sub> (b) Exit, 2.2—4.4% CO<sub>2</sub> (c) Rate of flow—500 c.c. p.m. then calculated. These figures give an absorption of 3.3% CO<sub>2</sub> per hr. This is partly explained by the low CO<sub>2</sub> content of the entrance gas of the run was made during a shut-down period in the refinery, the initial low rate of activation, and the fact that the total alkalinity concentration fell off so badly, all of which factors have been mentioned above. But even with all this, the absorption was a quantitative basis should still have been better than that recorded. During the run gas was observed coming out rapidly from the stop glass of the line 56 that it is quite possible that many of the large bubbles are not broken up by the agitators.

### 3. Material Transfer (Slurry)

It should here be stated that in all material transfer from now on, both slurry and gas, the former right bottles with rubber stoppers in them were used. In a previous run in which a 100 cc glass was used to the glass with a stopper and a stopper; the ground was previously removed from the inside of the bottle and it was also covered in the same way for the necessary pipe connections. The whole was supported in a very convenient manner. The right bottles were used and the waste in all tanks were completely eliminated.

The bottles used in this run were 100 cc. bottles in which the cylindrical agitators were all cut off to 3/4 inch. The stop glass in Run 24 and 25 was used for all material transfer. The bottles were placed so as to be accessible and the agitators were cut off to 3/4 inch to make the thick slurry, and the agitators were cut off to 3/4 inch. In some only way the bottles could be used for material transfer.



Continuous Recovery Apparatus Run 35, cont'd.

1. Dissociation

a. Mechanical - Except for welding, over a few small leaks in the body of the absorber, no changes were made.  
b. Chemical - (1) Dissociation pressure, 10-12 lbs. (2) Dissociation temperature, 120-130° F. (3) Dissociation pressure, 1-5 lbs. The actual high steam pressure may have been caused by an increase in the suspended solids content of the thick slurry with the resultant increased apparent viscosity and a consequent greater resistance of the slurry film to heat transfer.

2. Material Transfer (clear 11 and)

The U seal 75 on the side of the absorber was changed to a Y arrangement 82. The line 99 was connected to the bottom of 98 as shown and was to transfer the back lye to the sight bottle 77. No further storage of the flow occurred with this hook up but occasional charges of slurry came from the absorber thru 98 and 99. The 3/8" line 40 from the stirrer lye was changed to 1". Just above the pump 63 the recirculating line was increased from 1/2" to 1". The ratio of the new system is 100%. This was a start toward ending the solidification of the hot soda. In the lines carrying it, however, it was found that, with the small lines and rates of flow used, everything had to be kept moving. Once a condition was investigated, then trouble developed everywhere in succession. On a larger scale, with jacketed lines and so forth, these difficulties would appear.

3. CO<sub>2</sub> Scrubbing and Cooling

The absorber 101 formerly in position 50 (see Run #2) was placed on top of the dome of the scrubber and the line 102 was led from there to the condenser 103 and the drip bottle 104. This condensate was to be returned to the scrubber by the line 105. The pressure in the vent line 85 was equalized with that of the CO<sub>2</sub> line 66 by the line 106. Some production of CO<sub>2</sub> was very regular, a total of 340 ft.<sup>3</sup> (equivalent to 10 lbs.) was measured in 18 hrs. of uninterrupted operation. The best rate obtained here was about 3 lbs. per hr. but it must be remembered that the absorption was also very poor (4.3 lbs. per hr.) because most of the scrubber was maintained at over 80° C.

4. Results

The absorption was still poor, though this is due in part to other factors beside the actual efficiency of the unit itself. A gas settler was tried which worked very well and except for the slow rate of flow of the thick slurry thru the lines, the problem of concentrating the suspended NaHCO<sub>3</sub> was solved. Improvements were made in the transfer of the clear liquids so that the operation was more continuous than before and the way was opened for further advancement along this line. CO<sub>2</sub> was continuously produced for 18 hrs. The run lasted 40 hrs. and while still most of the system could not be kept functioning for long at the same time, the line to the scrubber was always fixed and production resumed in shortening.

### 1. Gas Gas Testing

It was substituted for water in the absorber and the pressure drop from 1.5 to 1.0 psi. The line from the stack and the first three lines 3, 4 and 5. This needed any further blowing out of the indicator. For the first 17 hrs. of the run the rate of the flow was too slow to count the lines. The entire unit was finally shut down and the line gas line was completely cleaned out. It will not be difficult to find a large scale with an efficient distributor was placed at the base of the stack. This problem would no longer exist.

2. Absorption was critical (1) changes - (a) It was decided to alter the baffles plates 17 and 18 and also the position of the gas distributor so as to restore this section of the absorber exactly as it was before the continuous runs were begun. In the five preceding efforts the gas had been escaping from the bottom of the distributor and was then trapped against the side of the absorber by the baffles which extended to there. When the gas finally did escape - with the force of its own pressure - it passed up the absorber in great blobs with the consequent very poor removal of  $\text{CO}_2$ . Now with the space provided on each side by the new plates 107 and 108 and with the distributor 109 set so that most of the gas was broken up into bubbles, the absorption was almost normal as is shown under the gas analyses below.

(b) The line 36 on the side of the absorber was revised.

(2) Leakage - As the bottom section 36 had to be taken down while the baffle plates and gas distributor were being changed, the flange then fitted so badly that it was impossible to make a tight joint and the asbestos rope/racket used was every unsuited to the purpose. In the future, all flanges should be so well made as to forestall all possibility of leaks. For the cost entailed by such delays is tremendous.

(3) Agitation - No change.

b - chemical

(4) Concentration - For the rest of the system at the withdrawal point

Calculated  $\text{CO}_2$  = 23.0%  $\text{H}_2\text{S}$  = 5.0%  $\text{CO}$  = 0.5%  
 Actual  $\text{CO}_2$  = 19.0%  $\text{H}_2\text{S}$  = 4.0%  $\text{CO}$  = 0.5%

This is part of the analysis.

(12) Gas analyses

- (a) Entrance -  $\text{CO}_2$  23.0%  $\text{H}_2\text{S}$  5.0%  $\text{CO}$  0.5%
- (b) Exit -  $\text{CO}_2$  19.0%  $\text{H}_2\text{S}$  4.0%  $\text{CO}$  0.5%
- (c) Gas flow - 1000 ft<sup>3</sup>/hr.

It will be seen that the gas is rich in  $\text{CO}_2$  and  $\text{H}_2\text{S}$  and that the above figures, but in such cases the conditions are not so ideal. The absorption of  $\text{CO}_2$  is not so good as it is in the case of the gas from the stack. The gas from the stack is rich in  $\text{CO}_2$  and  $\text{H}_2\text{S}$  and the absorption is very good. The gas from the stack is rich in  $\text{CO}_2$  and  $\text{H}_2\text{S}$  and the absorption is very good. The gas from the stack is rich in  $\text{CO}_2$  and  $\text{H}_2\text{S}$  and the absorption is very good.

### 3. Material transfer (urry)

The gas from the stack is rich in  $\text{CO}_2$  and  $\text{H}_2\text{S}$  and the absorption is very good.



Run 15, contd.

needed 1500g but there is some difficulty in obtaining a clear liquid. The coarse particles in the settler are worse than useless and a device should be incorporated which will prevent the film of precipitate on the surface of the liquid from being carried along. This was stated in Run 15, the blocking of slurry - or for that matter of the clear liquid - in the lines was caused by breakdowns in other parts of the system, the resultant sludge in the small passages used here caused the solidification. On a large scale this could not happen but with this small unit everything must be kept going or trouble ensues.

4. Dissociation

Mechanical - The decomposer over-ran smoothly. The only change made was the replacement of the rubber stop used for closing the chamber with regular aluminium so that there was no danger of them coming loose.

- (1) Dissociation Temp.  $21.5^{\circ}\text{C}$
- (2) Steam pressure  $1.7\text{ lbs.}$
- (3) Dissociation Pressure  $2.0-1.2\text{ Hg.}$

The above figures are normal, except for the slightly low dissociation pressure.

5. Material Transfer (Clear Liquid)

The line 69 for the weak lye was shifted from the bottom of the seal 88 to the position 109 above the level of the absorber; this was done so that no slurry would drain from the absorber. No changes were made in the method of handling the 1st conc. lye.

6.  $\text{CO}_2$  Scrubbing and Cooling

The carbonate line 103 which had plugged with slurry was shifted from its location on the side of the scrubber to the top (109a) as in the diagram. Except for one breakdown of 12 hrs. the other part of the system ran as usual. Over 1600 ft. were collected,  $\text{CO}_2$  was produced steadily. Lin 36 elapsed time of 220 ft. for 25 lbs. of gas, was evolved. The best rate attained was 3 lbs. per hr. The slurry in the scrubber was kept at a temp. of  $30^{\circ}\text{C}$  or better.

There now arises the question whether the scrubber is really of any use. In theory this unit condenses the water which is evaporated as the  $\text{CO}_2$  is liberated. This dilutes the gas and at the same time removing the moisture from the gas. However, the incoming lye is diluted by this condensate, and this dilution over a long period of time the weak carbonate could finally become very weak. The carbonate at the decomposer, already mentioned, with the high concentration of about 100-120, coming from the decomposer, considerable loss will be observed by the dilution with the condensate. It will be required to re-evolve the  $\text{CO}_2$  from any recombinator the concentration difference between the initially absorbed gas and the recombinator is not a factor. But, if a scrubber is used, it dilutes the gas and raises the mole fraction to 10 with the weak carbonate which is then re-evolved.

Am 75, cont'd.

The above mentioned test was conducted by the test engineer, Mr. J. H. [illegible], and the test results were as follows:

The test was conducted on a test engine of the type described in the test report, and the test results were as follows:

The test was conducted on a test engine of the type described in the test report, and the test results were as follows:

Witnesses:

Joseph E. [illegible]

Marcel E. [illegible]



Recovery of CO from flue gas.

Use of various absorption media - Report 1.

In section IV, the use of the turbo mixer as an absorber in the direction of the work was primarily indicated in the title. However, the purpose was to try various absorbing agents, and the turbo mixers were only used because of their convenience. Then, due to the improvements made on the apparatus, additional facts were discovered which have a bearing on the value of the mixers; these results are therefore incorporated in the report.

Some inherent is made here of the valuable advice of trial persons as to the construction of the apparatus and the operation of the absorber in the assembly which is carrying out the work.

Use of various absorption media - Report 1.

To determine quantitatively the rate of absorption of CO from flue gas using a soda containing 22.0 gms.  $\text{LiCO}_3$ , 150 gms.  $\text{Na}_2\text{CO}_3$ , also, to improve the operation of the turbo mixers used so that they shall require as little attention as possible.

Description of apparatus.

To carry out the recommendations in section IV, p. 13, the following changes were made:

1. The motor and the mixers were mounted on a solidly fixed steel bench.
2. Some warping in the cast aluminum body plates was rectified by putting them in a lathe and having a 1/8" deep by 1/2" wide groove cut. The plates then fitted snugly against the tops of the jars.
3. Three additional slots were cut in each body plate for bolts with which to draw down more evenly on the gasket.
4. After much discussion, the gasket finally selected was made of a piece of 3/8" port rubber hose cut to fit the grooves and joined together by a small piece of 3/32" hose and its whole coated with rubber paint. No slits were cut to allow the air to escape so that the general effect was that of a balloon tire.
5. A by-pass line was provided at the top of the gas inlet on the motor, to relieve the pressure when a sample was being taken. Only two mixers were used in series, as with three the excessive friction would have been too great and any improvement would have been noticed.

Procedure:

The mixers were each conditioned then filled to the top of the small jar with the  $\text{LiCO}_3$  -  $\text{Na}_2\text{CO}_3$  soda. The gas was passed in and the rotation started. Analyses were made of the entrance and exit gases and samples were taken of the soda to check on the absorption. The rate of gas flow was recorded as the volume of gas in. at 10 min. intervals. 300 cc. of water were added to allow the soda to cool. The steel bench proved to be a good base and the motor made a fair job. However, the rotation of the shafts had to be constantly checked and the drive would be as nearly uniform as possible. The total flow of gas was 1.2 ltr.





## Discussion:

1 - Shfts - There was no loss of gas by leakage. The necessity for taking up on the belts showed that an additional bearing would have to be used on each mixer to give a uniform rotation.

2 - Results - If we take the absorption obtained in section IV with 2 mixers, and using  $\text{Na}_2\text{CO}_3$  as a standard, the value of the other absorbing agents can then be determined. The data are taken just after precipitation began, as would be the case in large scale continuous operation.

Factor	$\text{Na}_2\text{CO}_3$	$\text{Na}_2\text{CO}_3$ soln.	$\text{Na}_2\text{CO}_3$ soln.
Ave. % $\text{CO}_2$ in exit gas	10.4	10.4	9
Apparent absorptive efficiency, %	95	95	97
$\text{Na}_2\text{CO}_3$ absorbed per cu. ft. absorber space	0.035	0.035	0.188

It can thus be seen that the straight  $\text{Na}_2\text{CO}_3$  soln. has an apparent absorptive efficiency of 97% as great as that of the 5%  $\text{CO}_2$  mixture per gal. of absorber space. The  $\text{Na}_2\text{CO}_3$  soln. will take up 5 times as much  $\text{CO}_2$ .

While the results with the 5%  $\text{CO}_2$  -  $\text{Na}_2\text{CO}_3$  mixture were at first encouraging (the exit gas averaged about 4.5%  $\text{CO}_2$ ), the absorption began to fall off badly just before precipitation, and continued to get worse until the exit gas rose to 16.0%  $\text{CO}_2$ , just after the bicarbonate came down. Apparently, an equilibrium was reached where no more  $\text{CO}_2$  will be absorbed. These facts make the mixture worthless, as it can only be operated with very low concentrations of bicarbonate in soln.

## Summary:

The soln. containing  $\text{Na}_2\text{CO}_3$  alone proved far superior as an absorbing medium to the 5%  $\text{CO}_2$  mixture. All of the leaks and mechanical difficulties were eliminated except one (that of an additional bearing for the mixer shafts) and this will be taken care of on the next run.

## Sample Calculations

The methods used for arriving at the material balance and the various factors for the results are the same as in section IV, with the exception of the report of 1.000, a mixture of 22 parts  $\text{Na}_2\text{CO}_3$  and 15 parts  $\text{Na}_2\text{CO}_3$  is used so that an average molecular weight must be found:

$$\begin{aligned} \frac{22 \times 106}{22 \times 106 + 15 \times 100} &= 100 \times 1.5 \\ &= 126 \text{ ave. mol. wt.} \end{aligned}$$

Then, to determine the quantity of  $\text{CO}_2$  absorbed in a given amount of carbonate

$$\frac{126}{125} \times 0.035 \text{ as the factor}$$

and all other calculations are carried out in a like way.

### Problem:

To determine quantitatively the rate of absorption of  $\text{CO}_2$  from fine gas using a soln. containing 25.0 gms.  $\text{NaOH}$ , 15.2 gms. dextrose on a weight basis. This represents a 10% dextrose soln. Also, to improve the drive of the mixers so that a uniform speed is maintained at all times.

### Description of Apparatus:

The same solvent was used as in Report #1, but the position of the mixer-shafts and of the motor was firmly fixed by a sliding bar of 1 1/2" flat iron with 2 brass nipples threaded in to act as bearings. The bar was fixed at one end by one of the bolts for the motor and at the other end by a support brace for flat iron and which was bolted to the bench. The position of the motor itself was kept constant by pieces of flat iron which were fastened to both the motor and the bench.

### Procedure

Only one change was made from the method in Report #1 - as before, the tubes were filled to the mark in the trial soln., blue gas was passed in, and the absorption began. However, in addition to the other data taken, the speed of the motor and of each of the mixers was frequently checked with a revolution counter. The motor got very hot during the run.

After 2 hr., precipitate formed and the soln. was then fortified with fresh dextrose - dextrose mixture. This was repeated after a run of 2 hr. more and then a final run of 2 hr. was made. The total time of absorption was 1 hr.





## Discussion

1 - Data - no gas leaks were encountered and the machine ran with no bearings in it provided a very steady drive. The fact that the motor was very hot and continuous operation of 1 hr. or more seems to indicate that it is very heavily overloaded. This is substantiated by the data on the speed of the motor and the figure - the motor was 1520 r.p.m., considerably below the rated value of 1725 r.p.m.

2 - Results - as in report #1, the values obtained with the  $\text{CaCO}_3$  coil are taken as the standard. The figures for the  $\text{CaCO}_3$  - dextrose mixture are an average of the first two 1 hr. runs.

Factor	CaCO <sub>3</sub> - dextrose	CaCO <sub>3</sub>
abs. % CO <sub>2</sub> absorbed	4.4	3.9
absorptive efficiency, %	66	57
abs. CO <sub>2</sub> absorbed per unit absorber space	0.113	0.193

The above figures show that the absorptive efficiency is slightly better (94) with the addition of dextrose; also, the  $\text{CO}_2$  absorbed per unit of absorber volume is about 5% greater.

Against this, however, it should be considered that the color of the carbonate dextrose coil changed from its original light yellow to an almost pitch black, indicating that the dextrose was badly decomposed. Inasmuch as, in actual operation, the burner would be subjected to heating for 12 hr. periods at 2,600° and with the very concentrated alkali coils, it is doubtful whether any dextrose at all would be left in very short time. Some precipitate also settled very slowly, probably due to the increased viscosity of the coils, and this would seriously interfere with any practical collection of such a picture.

## Summary

The addition of dextrose to the  $\text{CaCO}_3$  coil increased the absorption slightly but this was offset by the rapid decomposition of the burner and the poor settling of the precipitate.

The difficulties with the 4-1-2 burner were largely ironed out, except that the motor seems badly overloaded.



**Problem**

To determine quantitatively the rate of absorption of  $CO_2$  from pure gas into a soln. containing 25 gms.  $Na_2CO_3$ , 1.5 gms. sucrose.

This is equivalent to the addition of 0.044 mol. of sucrose to the soln.

**Description of apparatus**

Previous to this run, the motor was sent to the electrical shop for over-hauling and testing - the report said that the motor was in good condition. The only conclusion that can be drawn is that it is badly overloaded, probably by as much as 100%. Otherwise, the set-up is identical with that of Report #2.

**Procedure**

The same method was followed as in Report #2 - the apparatus was placed in position, the two jars were filled to the mark with the test soln., the  $CO_2$  was released in, and the absorption began. The usual stops were made at 1 hr. intervals to allow the motor to cool. After 3 hr., a 2 liter portion of the slurry was withdrawn and fresh soln. was added to raise the carbonate content. The run was then continued for a hr. longer. The total time of absorption was 17 hrs.



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## Discussion -

1 - Data - The material balance shows no appreciable loss of gas by leakage. In fact, the entire outfit worked very smoothly. The only hitch is the overload on the motor. Since no instruments are available for power readings, the exact size of the motor necessary is not known. Also, it would probably be wise to continue to use the same motor (with adequate rest periods), since all of the data was thus far obtained with it.

2 - Results - The figures for the  $\text{Na}_2\text{CO}_3$  and sucrose soln. are an average of the first two tests taken in the last 2 hr. of operation; the last test is not considered as the saturation was too far advanced.

Factor	$\text{Na}_2\text{CO}_3$ Soln.	Sucrose Soln.
Ave. % $\text{CO}_2$ in Exit Gas	2.6	5.9
Apparent absorptive efficiency, %	80	57
lbs. $\text{CO}_2$ absorbed per gal. absorber space	0.222	0.168

It can thus be seen that the addition of a small amount of sucrose to the regular  $\text{Na}_2\text{CO}_3$  soln. raised the apparent absorptive efficiency 23%; on a more absolute basis, the quantity of  $\text{CO}_2$  absorbed per unit of absorber volume is increased 15%.

These results are very encouraging, especially when it is noted that the soln. rapidly darkened at all. However, it would be well to thoroughly investigate the effect upon the sucrose of the high temp. and alkali concentrations employed in the dissociation.

## Summary:

The use of 2.5 gms. of sucrose in with the 25.0 gms. of  $\text{Na}_2\text{CO}_3$  in soln. increased the quantity of  $\text{CO}_2$  absorbed about 20%. The sucrose showed no noticeable decomposition.



## Use of Various Absorption Media Report #4.

### Problem:

To absorb  $\text{CO}_2$  in a solution containing 25.0 gms  $\text{Na}_2\text{CO}_3$ , 2.5 gms. sucrose until the practical operating point is reached. The precipitated  $\text{NaHCO}_3$  is then to be concentrated until it is in the same proportion in which it is normally dissociated. The effect of the high temp. and alkali concentration on the sucrose is then to be noted. After dissociation, the clear liquid is to be diluted to its original concentration and the whole cycle of absorption and dissociation repeated, until the stability of the sucrose under such conditions is established.

### Description of Apparatus

The usual turbo-mixer set up was used for absorption. For the dissociation, the 2 gal. steam jacketed section of a glass lined autoclave, was selected. The system was open to the air.

### Procedure

The absorption was carried out till a precipitate appeared and was then continued for 5 min. titrations were made and the composition of the system was determined to be,

	$\text{Na}_2\text{CO}_3$	15.7 gms.
	$\text{NaHCO}_3$	8.0 gms
	Sucrose	2.5 gms.
		0.6 gms $\text{NaCl}$ , ppt.

The clear liquid was then drawn off until the concentration of the precipitated  $\text{NaHCO}_3$  was increased to 20 gms. and this portion of 0.46 gal. of heavy slurry was dissociated in the open autoclave. The stirring was done by hand.



1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515	1516	1517	1518	1519	1520	1521	1522	1523	1524	1525	1526	1527	1528	1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1540	1541	1542	1543	1544	1545	1546	1547	1548	1549	1550	1551	1552	1553	1554	1555	1556	1557	1558	1559	1560	1561	1562	1563	1564	1565</
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10.35	31.6	9.0	15.6	14.80	14.60	11.50	65	14.9	39.7	14.7	46.8
11.50	31.5	9.1	15.0	14.90	14.70	11.60	65	14.8	39.6	14.6	46.7
12.15	31.4	9.2	14.4	14.40	14.20	11.70	65	14.7	39.5	14.5	46.6
13.10	31.3	9.3	13.8	13.80	13.60	11.80	65	14.6	39.4	14.4	46.5
14.10	31.2	9.4	13.2	13.20	13.00	11.90	65	14.5	39.3	14.3	46.4
15.10	31.1	9.5	12.6	12.60	12.40	12.00	65	14.4	39.2	14.2	46.3
16.10	31.0	9.6	12.0	12.00	11.80	12.10	65	14.3	39.1	14.1	46.2
17.10	30.9	9.7	11.4	11.40	11.20	12.20	65	14.2	39.0	14.0	46.1
18.10	30.8	9.8	10.8	10.80	10.60	12.30	65	14.1	38.9	13.9	46.0
19.10	30.7	9.9	10.2	10.20	10.00	12.40	65	14.0	38.8	13.8	45.9
20.10	30.6	10.0	9.6	9.60	9.40	12.50	65	13.9	38.7	13.7	45.8
21.10	30.5	10.1	9.0	9.00	8.80	12.60	65	13.8	38.6	13.6	45.7
22.10	30.4	10.2	8.4	8.40	8.20	12.70	65	13.7	38.5	13.5	45.6
23.10	30.3	10.3	7.8	7.80	7.60	12.80	65	13.6	38.4	13.4	45.5
24.10	30.2	10.4	7.2	7.20	7.00	12.90	65	13.5	38.3	13.3	45.4
25.10	30.1	10.5	6.6	6.60	6.40	13.00	65	13.4	38.2	13.2	45.3
26.10	30.0	10.6	6.0	6.00	5.80	13.10	65	13.3	38.1	13.1	45.2
27.10	29.9	10.7	5.4	5.40	5.20	13.20	65	13.2	38.0	13.0	45.1
28.10	29.8	10.8	4.8	4.80	4.60	13.30	65	13.1	37.9	12.9	45.0
29.10	29.7	10.9	4.2	4.20	4.00	13.40	65	13.0	37.8	12.8	44.9
30.10	29.6	11.0	3.6	3.60	3.40	13.50	65	12.9	37.7	12.7	44.8
31.10	29.5	11.1	3.0	3.00	2.80	13.60	65	12.8	37.6	12.6	44.7
32.10	29.4	11.2	2.4	2.40	2.20	13.70	65	12.7	37.5	12.5	44.6
33.10	29.3	11.3	1.8	1.80	1.60	13.80	65	12.6	37.4	12.4	44.5
34.10	29.2	11.4	1.2	1.20	1.00	13.90	65	12.5	37.3	12.3	44.4
35.10	29.1	11.5	0.6	0.60	0.40	14.00	65	12.4	37.2	12.2	44.3
36.10	29.0	11.6	0.0	0.00	0.00	14.10	65	12.3	37.1	12.1	44.2
37.10	28.9	11.7				14.20	65	12.2	37.0	12.0	44.1
38.10	28.8	11.8				14.30	65	12.1	36.9	11.9	44.0
39.10	28.7	11.9				14.40	65	12.0	36.8	11.8	43.9
40.10	28.6	12.0				14.50	65	11.9	36.7	11.7	43.8
41.10	28.5	12.1				14.60	65	11.8	36.6	11.6	43.7
42.10	28.4	12.2				14.70	65	11.7	36.5	11.5	43.6
43.10	28.3	12.3				14.80	65	11.6	36.4	11.4	43.5
44.10	28.2	12.4				14.90	65	11.5	36.3	11.3	43.4
45.10	28.1	12.5				15.00	65	11.4	36.2	11.2	43.3
46.10	28.0	12.6				15.10	65	11.3	36.1	11.1	43.2
47.10	27.9	12.7				15.20	65	11.2	36.0	11.0	43.1
48.10	27.8	12.8				15.30	65	11.1	35.9	10.9	43.0
49.10	27.7	12.9				15.40	65	11.0	35.8	10.8	42.9
50.10	27.6	13.0				15.50	65	10.9	35.7	10.7	42.8
51.10	27.5	13.1				15.60	65	10.8	35.6	10.6	42.7
52.10	27.4	13.2				15.70	65	10.7	35.5	10.5	42.6
53.10	27.3	13.3				15.80	65	10.6	35.4	10.4	42.5
54.10	27.2	13.4				15.90	65	10.5	35.3	10.3	42.4
55.10	27.1	13.5				16.00	65	10.4	35.2	10.2	42.3
56.10	27.0	13.6				16.10	65	10.3	35.1	10.1	42.2
57.10	26.9	13.7				16.20	65	10.2	35.0	10.0	42.1
58.10	26.8	13.8				16.30	65	10.1	34.9	9.9	42.0
59.10	26.7	13.9				16.40	65	10.0	34.8	9.8	41.9
60.10	26.6	14.0				16.50	65	9.9	34.7	9.7	41.8
61.10	26.5	14.1				16.60	65	9.8	34.6	9.6	41.7
62.10	26.4	14.2				16.70	65	9.7	34.5	9.5	41.6
63.10	26.3	14.3				16.80	65	9.6	34.4	9.4	41.5
64.10	26.2	14.4				16.90	65	9.5	34.3	9.3	41.4
65.10	26.1	14.5				17.00	65	9.4	34.2	9.2	41.3
66.10	26.0	14.6				17.10	65	9.3	34.1	9.1	41.2
67.10	25.9	14.7				17.20	65	9.2	34.0	9.0	41.1
68.10	25.8	14.8				17.30	65	9.1	33.9	8.9	41.0
69.10	25.7	14.9				17.40	65	9.0	33.8	8.8	40.9
70.10	25.6	15.0				17.50	65	8.9	33.7	8.7	40.8
71.10	25.5	15.1				17.60	65	8.8	33.6	8.6	40.7
72.10	25.4	15.2				17.70	65	8.7	33.5	8.5	40.6
73.10	25.3	15.3				17.80	65	8.6	33.4	8.4	40.5
74.10	25.2	15.4				17.90	65	8.5	33.3	8.3	40.4
75.10	25.1	15.5				18.00	65	8.4	33.2	8.2	40.3
76.10	25.0	15.6				18.10	65	8.3	33.1	8.1	40.2
77.10	24.9	15.7				18.20	65	8.2	33.0	8.0	40.1
78.10	24.8	15.8				18.30	65	8.1	32.9	7.9	40.0
79.10	24.7	15.9				18.40	65	8.0	32.8	7.8	39.9
80.10	24.6	16.0				18.50	65	7.9	32.7	7.7	39.8
81.10	24.5	16.1				18.60	65	7.8	32.6	7.6	39.7
82.10	24.4	16.2				18.70	65	7.7	32.5	7.5	39.6
83.10	24.3	16.3				18.80	65	7.6	32.4	7.4	39.5
84.10	24.2	16.4				18.90	65	7.5	32.3	7.3	39.4
85.10	24.1	16.5				19.00	65	7.4	32.2	7.2	39.3
86.10	24.0	16.6				19.10	65	7.3	32.1	7.1	39.2
87.10	23.9	16.7				19.20	65	7.2	32.0	7.0	39.1
88.10	23.8	16.8				19.30	65	7.1	31.9	6.9	39.0
89.10	23.7	16.9				19.40	65	7.0	31.8	6.8	38.9
90.10	23.6	17.0				19.50	65	6.9	31.7	6.7	38.8
91.10	23.5	17.1				19.60	65	6.8	31.6	6.6	38.7
92.10	23.4	17.2				19.70	65	6.7	31.5	6.5	38.6
93.10	23.3	17.3				19.80	65	6.6	31.4	6.4	38.5
94.10	23.2	17.4				19.90	65	6.5	31.3	6.3	38.4
95.10	23.1	17.5				20.00	65	6.4	31.2	6.2	38.3
96.10	23.0	17.6				20.10	65	6.3	31.1	6.1	38.2
97.10	22.9	17.7				20.20	65	6.2	31.0	6.0	38.1
98.10	22.8	17.8				20.30	65	6.1	30.9	5.9	38.0
99.10	22.7	17.9				20.40	65	6.0	30.8	5.8	37.9
100.10	22.6	18.0				20.50	65	5.9	30.7	5.7	37.8

2. Dissection. The top of the quarry could not be reached above 3200 and 3220, the west part averaged about 3600. The hostile sand belly on the side of the quarry and a loose rock could not be reached by any means. The hostile sand belly on the side of the quarry and a loose rock could not be reached by any means. The hostile sand belly on the side of the quarry and a loose rock could not be reached by any means.

THE UNIVERSITY OF CHICAGO PRESS

[illegible]

# Discussion

1. Rate of Absorption - The final run of the apparatus, as arranged in report #2, worked very well as usual. In the case where the  $\text{CO}_2$  in the exit gas rose to 4.4%, it should be noted that the speed of the stirrer fell to 1250 r.p.m. When the stirrer rotated at 1480 r.p.m., the value of the exit gas went down to 2.8%  $\text{CO}_2$ , as positive proof of the high speed necessary with the auto-mixers.

2. AD Association - The jacketed section of the autoclave, which was used, was entirely unsuited for the purpose; the quantity of slurry was too small for the size of the vessel and this caused the entry of air also from the mechanical stirring device is essential.

3. Results - Absorption - The calculations are from the one gas test made after precipitation began.

Factor	$\text{CO}_2$ in soln.	$\text{CaCO}_3$ soln.
	2.3	3.3
Avg. $\text{CO}_2$ in exit gas	2.9	5.9
Apparent absorptive efficiency, %	80	57
$\text{CO}_2$ absorbed per gal. absorber space	0.224	0.158

The apparent absorptive efficiency for the  $\text{CaCO}_3$  in sucrose soln. is still 25% greater than for the straight carbonate soln., but the absolute quantity of  $\text{CO}_2$  absorbed was 35% higher, as against only 15% in report #2.

4. Discoloration - Since the apparatus used was not adaptable no conclusions can be drawn.

## Summary

The results obtained here substantiated those of report #3 - that the addition of 4.5 gms. of sucrose to 100 cc. of 2.3%  $\text{CO}_2$  soln. increased the absorption by 20-30%.

The attempt to dissociate the slurry was unsuccessful and a different type of apparatus will have to be used.



## Use of Various Absorption Media Report #5.

### Problem:

The work to be done is the same as in Report #4 - to prepare a slurry of desired concentration of precipitated  $\text{FeCO}_3$  using the  $\text{Fe}_2\text{CO}_3$  - sucrose soln. for carbonation; the slurry is then to be dissociated and the effect on the sucrose noted. The cycle shall be repeated until the stability of the sugar is determined. It is necessary to devise a suitable apparatus for the dissociation of the total quantity of slurry prepared.

### Description of apparatus

The regular Turbo-mixer equipment was used for the absorption. A completely new apparatus, as shown in the diagram, was built for the dissociation. A 10" piece of 3" dia. pipe was cut and a long thread run on one end. On this thread a 5" x 5" reducing bushing was fitted. The steel plate shown was then welded to the bottom of the pipe and the whole then fitted into a 6" coupling. Two holes were drilled and tapped in this sleeve, to act as inlet and outlet for the steam. The entire outfit was then welded on to a piece of channel iron to serve as a base. For the drive a cross piece of 1" x 1" flat iron with a 3" brass nipple threaded in was provided as a bearing; this was supported by two pieces of flat iron as shown in the diagram. A second bearing was furnished by utilizing one of those in the driving bar for the mixers. The slurry was agitated by using one of the impellers of the Turbo-mixers; the speed was reduced to 250 r.p.m. by means of the system of different sized pulleys.

### Procedure

The absorption was carried out as customary to precipitation and then continued for 5 min. A analysis was made and it was determined that 6.3 grms. of precipitated  $\text{FeCO}_3$  were present in the slurry; the clear liquid was then drawn off until this concentration was increased to 30 grms. The dissociation was carried out at 215°C in the new





# Inter-lab. Science

Absorption	lbs. CO <sub>2</sub> by	lbs. CO <sub>2</sub> by	
Co.	in. gas analysis	titration	Diff.
1	25	0.90	0.75
2	30	0.37	0.40

## Discussion:

1. Rate of Absorption - The rate was carried out as usual and except for the fact that the speed dropped, and consequently, the absorption with it, no difficulties were met.

2. Dissociation - The only trouble that developed was due to the fact that the 5" pipe had not been bored out as specified, and the soln. was so badly contaminated with rust particles that it was difficult to tell whether the dark color was due to the presence of colloidal iron or to the breakdown of the sucrose. A polarization titration established that the sugar was unchanged. Tests were also made which showed the presence of iron in the soln. It was evident, however, that a vessel would have to be used which was made of such a material that no rust could be introduced.

## 2. Results: a - Absorption and b - on the original

a - Absorption - The exit gas was slightly higher (3.5% CO<sub>2</sub>) than in the other runs, but as has been pointed out, this was due to the lower speed (1200 r.p.m.) of the mixers. The second run gave slightly better results, the exit gas averaging 2.4% CO<sub>2</sub>. These figures are about the same as those previously obtained in report nos. 3 and 4 with the Na<sub>2</sub>CO<sub>3</sub> - sucrose soln. and are further evidence that the dissociation did not destroy the sugar. Yet, it would be wise to proceed so early that the sucrose could always remain unchanged, without first repeating the cycle of dissociation and absorption very many times.

## Summary:

The absorption was carried out and then the concentrated slurry was associated. When the clear liquid was diluted to the proper strength, a second absorption showed just as good results as the original one.

A problem must be met in the continuation of the soln. by iron

Author's:

*Walter P. Knecht*  
*Michael E. Knecht*

*W. Knecht*

Date Received 6/2/50  
From SA E.A. Pitt  
(Name of Contributor)  
Phila. FBI  
(Address of Contributor)

By \_\_\_\_\_  
(Name of Special Agent)

To Be Returned Yes ( )  
No (✓)

Description: Notes of search of P23 indexed at Phila. Pa.  
by SA Edward A. Pitt - 10 pages.

File No. 65-4307-1-B-6(4)



Search of 6823 Rindell Ave Phila.

4/1 - 180

Upstairs - SA T.F. Lanning & Ed Pitt  
Harry Gold's Room

1st floor - SA Burgess & Birkby

Basement - SA Burgess & Birkby

Garage - SA Gallahan & Masters

Upstairs -

John's Bedroom - SA Birkby.

Bedroom - SA Birkby.

Father's Bedroom - SA Birkby & Burgess.

65-4307-1-B-6(4)

6/2/50 arrived at 6823 Kenda Ave,  
Leahurst, Phila. Pa at 3 PM

Joseph Fred signed letters of search  
Harry Fred's bedroom SW corner of house

In SW corner of room found cabinet:

Envelope entitled "Re - org 3-29-46

Dr. Reich's stuff"

In green "Oxford" jacket <sup>re "Potash"</sup> the paper containing  
typewritten in German starting "98/1002),

Die Achse wohl ---

ended search 6/3/50 6 PM - Leahurst

6/3/50 arrived at 9:50 PM

3 sections broke down on West wall Harry Fred's  
Room next to cabinet in SW corner.

Top section -

Green book "Micro-Plantes" Dr. Reich  
Over <sup>Paul</sup> handwriting "Sibley, Lindsay, & Coulters."

Bottom section -

Green book "Elements of the Differential and

Integral Calculus" - In Dr. Reich's corner

Found a Reading Railroad Ticket envelope containing:

Small envelope with 2 tickets Forest Theatre Jan 31, 1943  
2 Pullman stubs Phila to Leahurst & Leahurst to Phila. Dec 26, 1942

6/3/50 Navy Bonds Room 68v3 Kindred Ave  
Leah Phila

Continuing from page 1 of note - 3 section Bookcase  
next to cabinet in SW corner of room near window.

Bottom section:

Book entitled "From Double Eagle to Red Flag"  
by Krasoff. Name in inside Book cover  
is "A.D. Slack 1935".

3 Section Bookcase next to piano next to desk:

Bottom section:

In Cardboard box a card with following info:

"Antea B. Topuski Restaurant 41-2329 4th

Long Island City, L.I. N.Y. Stillwell 4-9623

Res. Phone Riverwood 6-2833"

Another card from box with letter case &

letter found 2 Watch Books Police office

Seattle, Wash.

End



6/3/50 Search of 68x3 Kindred Ave Phila.  
Harry Gold Room

on Top of Desk:

Note on piece of paper Toml

Note on paper on top starting "all R+B Dept"

Envelope - letter to Harry Gold from

She B. Kross (12 pg)

(12) card with name Dr. E. L. Beckman

Endlist Completed search of 68x3 Kindred St  
at 6 PM 6/3/50. Endlist

4/2/50 6823 Kinshel - Phila, Pa.  
Harry Fred Rood SW corner of house  
SW corner room cabinet contains -

Numerous Issues of Chemical Abstracts,  
The Catalyst - (Phila section of Amer. Chem. Society)  
Journal of American Chemical Society,  
Industrial & Engineering Chemistry  
Pamphlet containing numerous prepared Photo. <sup>prints</sup>  
Large envelope containing pamphlets & material entitled:

"Re-ory 3-29-46  
Dr. Reich's stuff"

(Letter on envelope from Dr. Reich on P.T. Reich,  
of Penn. Sugar Co. Dec 1941)

(Envelope contains many graphs, plots &  
lectures at Cornell Institution, school Oct 17-19, 1940.  
In Pamphlet entitled "Information, Ideas, letters  
from Dr. Reich on 'Fast-Vitamins'"

Large envelope entitled "Re-ory. 3-29-46

Univ. of Penna.  
Physics & chem. note books"

Did not take material on this sheet

E. A. Rood

Types Harry Gold <sup>Print</sup> 6813 / Keindred Ave  
Cloth-Carabond <sup>Cabinet SW corner</sup> file jacket alphabetized.

Phenylate:

A) Conversion of aliphatics to aromatics  
B) Looks like Cooley titration notes in 1939

C - Correspondence - Vitamins

D - Re-ry - 3-25-46

Dense aluminum acetate  
here

H - Organic chemistry notes 1925 Densel

M - McCaffrey Lectures - St Joseph Cooley  
3-4-1946

O - envelope "Re-ry - 3-25-46"

organic chemistry exam + other stuff

PQ - Pamphlet "Typewriter Reports Penn. Al. Exp."

July 9 + 15 New Republic

Pamphlet "The control of Germany Japan"

Pushkin Brothers distillers

S - Salt Recovery

T - "Loreal"

65

Did not take material on this page

to Lora



(3)  
Harry Erdman 68 vs. Kunkel Ave 6/150

Cabinet SW corner

Pamphlets

Theory of Equations

Theses: Preparation of pure lactic acid

Logic 1934

Epistemology 1934

Lactic acid

Physical Chemistry - Notes & Problems

Lactic acid (1)

Lactic acid 2

Physical Chemistry Laboratory 1940

Chemical Eng 1935-36

Did not take material on this page.

Exhibit 6/3/50

4/2/50 6823 Hendry Air Phil  
Harry Gold Room

In The Spiral Notebook #40

on the page following names: June 1949

Louis Trombetta

5319 Lindeburg Blvd

Phil 9-1020

PFA 3728 N Bond

Bredwin 9-5513

William

Tri 7-0450

on another page

Alby Ex 6-6810

Sho RHT Co Me 7-5600

Hushaw Rib 5-720

Bar 2-5655

another page - Jim Douglas (carpenter)  
Ste 2-8334

2525 Lyndall St.

another page - John E Yerrick

WA 4-2162

Did not take material on this page 4/3/50  
Eckert

4/3/50 6823 Kendal Ave

Harry Fred's Room

Spent 40 Notebook contains names: March 49

"References"

Dr R Adams Hutchins - Dept Head  
Dept of Agriculture & Biol Chem.

Pa State College - State College Pa.

Dr O B Jensen

Professor of Phys. Chemistry  
Dept of A & P

Phone Dorothy Bell

Allentown 2-6484

Mr Donald

328 Midland Ave

St Davids

Wayne 0816

Mr B. Polis

April 49

Chertown Hall 7-5700

Did not take material on this page  
revised 6/3/50



6/3/00 68x3 Kender's Ave  
Harry Gold's Room

#40 Spirit Notebook contains:  
Dr. Gold  
Number 3-8393

Red not take material on this page 6/3/00  
enlist

Date Received 6/3/50  
From SA John Bellion & Robert Masters  
(Name of Contributor)  
Phila. FBI.  
(Address of Contributor)

By \_\_\_\_\_  
(Name of Special Agent)

To Be Returned Yes ( )  
No (X)

Description: Notes of search made at 68V3 Kindred St  
Phila. Navy Dept Residence by SA Bellion & R. Masters  
one page.

File No. 65-4307-1-B-6(6)

6/3/50

Masters & Gallison

obtained from cabinet in garage

6823 indexed

1.49 1 1/2 x 2 1/2 purse palander containing

folded sheet of 3x5 white paper

2 1/2 one envelope postmarked Fair Rockway July

23, 1931 to Harry C. addressa Holman

3.49 One loose leaf spiral note book (U. of P.)

heavy name broken

4.49 Chemical Equipment Preview July 1942

heavy name Art Simmons

5.50 Tri-State College Bulletin Sept 1937

Vol 54 #3

6.50 Four Industries March 1940

7.58 One white paper 5 1/2 x 11" (folded letter)

8.53 one yellow sheet 5 1/2 x 8 1/2 (names & address)

9.54 " " 5 1/2 x 9 1/2 (names & address)

10

11.54 Ill. Service return envelope 1.5 #65

12.55 Industrial Engineering Chemistry

Vol 27 #35

13.56 One Junior League magazine

heavy word Future Feb. 1916

65-4307-1-B-6 (5)



Date Received 6-5-50

From \_\_\_\_\_  
(Name of Contributor)

\_\_\_\_\_  
(Address of Contributor)

By James F. Cairns  
(Name of Special Agent)

To Be Returned Yes ( )  
No (☒)

Description: notes made of names observed in  
books in during search of 6823 Kinsler St.,  
Phila. - articles not taken from " " "

File No. 65-4307-4-B-6(6)

Top of Book Case - near Window (1) (6)

"hair in the street" - property of

Mrs Harry Zion 68 26 Kendra

SB. - loaned ed by Jpe J. Shultz man

ago. "October 1945"

"Property of 'The Reiters'"

inside any visit page - of book -

6-2-50

Y Jec

65-4307

65-4307-1-B-6(6)

(2)

Name B. Lichtenbaum  
in book of Arithmetic of Pharmacy  
Sterum

Name Theodore B. Krouse  
inside 1<sup>st</sup> page right upper corner  
Vol XVII - 1948. In Facb.  
In Facb Inc. 280 Lafayette St  
N.Y.

Names: Regina Loo KABANG (?)  
Immaculate College  
Pa.

L. J. Simon  
443 E. Wyoming Ave.  
Phila.

128 page in book The Methods of  
Organic Chemistry  
Partis Stewart - Branch  
KFC 6-3-50 65-4307



③  
Name Miriam Mae Kowitz, Exe  
Book Ulysses by James Joyce

Name William A. Steyer on  
inside cover - introduction to  
medical science by Boyd

Name Clough & "Do not remove  
from Club Room"

Sander Marriott

ph - GR 1256

inside index of "Coronado's  
Children by J. Frank Dobie

Shirley Okin

2400 So Phillips St

Phila.

girl friend while in college & prior

she married while Harry at same college

FFL 6-3-50 65-4307

Folder - heading  
Photo copies - Nicotinic Acid.  
contains notes - etc.

Folder - heading  
Photo copies - PANTOTHENIC  
Acid.  
contains photostats in german  
from NY Public library -

Folder - heading  
Photo copies - Pyridoxin  
(B6)  
photostats - made by NY Public  
library in german -

Name M-D. P. Helfers Jr.  
Lawrenceville 1946 126 page  
book Carbo - Hydrate Metabolism  
by Foskier & Hestine.

TFC 6-3-50 65-4307

~~Recher~~

Envelope: add to Mr Ronald J.

Baird 5722 No Lawrence St

Phila, Pa. from The American

Institute of Chemistry 60 East 42<sup>nd</sup> St

NY 17, NY. - top rt Drawer desk

near Hong Kong also. The institute

News. Mar 1946 Phila Pa

Feb 4 Feb 9-8898 on upper

rt hand side of first page.

TFG 6-3-50 65-4307



Date Received 6-5-50

From \_\_\_\_\_  
(Name of Contributor)

\_\_\_\_\_  
(Address of Contributor)

By Thomas F. Carrig  
(Name of Special Agent)

To Be Returned Yes ( )  
No (✓)

Description: NOTES MADE OF ARTICLES & PHOTOS FOUND  
WHICH WERE TAKEN FROM RESIDENCE AT 6823  
KINDRED ST. - PHILA., PA. on 6-3-50

File No. 65-4307-1-B-6(T)

Search Seridime 6823 Kindred 88 Phila. JPC  
commenced 6-2-50 3:00 P.M.  
ended March 6 3:00 P.M. 6-2-50 6-3-50 commenced 9:00 A

Harry gold's Bedroom

Top of Bookcase - nearest window

1. Dec 1947 pocket diary  
Book.

2nd or middle case - Book case  
nearest Desk. Harry gold's Bedroom

1. paper re Paul Starcher.  
found between books - loose.

2. postcard. bearing machine printed  
name "Dr. James H. Stewart" & other  
hand written names - found middle  
case - loose.

3. letter from Doc to Harry  
dated May 24, 1946 - found  
loose.

4. United Airlines - Time Table dated  
Effective April 28, 1946 - found loose.

65-4307-1B-4(7)

middle case - Book case next to Desk

5. 4. photostat in german -  
found in note book of J. Gold.  
contents concern radio sound etc

6. 4 photostat in german - found -  
loose.

7. Manila Envelope - mailed J. H.  
Bauer to Job. Re: org. 3-29-46  
containing misc papers.  
Top of Harry Gold's Desk  
Bed-room.

1. Envelope postmarked Oct 4,  
1949 at Boston Mass add. to  
Mr. Harry Gold. - no contents

Harry Gold's Desk upper  
right hand draw. - rear.

1. ~~Box~~<sup>37</sup> of 345 cards containing  
names & address & other misc information  
~~attached~~ <sup>these</sup> together with rubber band.  
2. letter without envelope to Harry  
From Marion dated Oct 27, 1943



3. 3. 6/3/50 TFC  
photostat. Also Told in the  
Long House.

4. One Envelope containing paper  
& business cards. 12 in all - cards  
found loose - identified & placed in  
white Envelope

Completed Search 6:00 P.M. 6-3-50

Date Received 6/3/50

From \_\_\_\_\_  
(Name of Contributor)

\_\_\_\_\_  
(Address of Contributor)

By S.A. Fred C. Birkby  
(Name of Special Agent)

To Be Returned Yes ( )  
No (X)

Description: Notes of S.A. Fred C. Birkby re:  
search of residence of HARRY GOLD, 6823 KENDRA AVE.  
PHILA. PA. on 6/3/50

File No. 65-4307-1-B-6(8)

65-4307-1-B-6(8)

6/3/50 Start - 10:00 AM

10:11 AM - Secretary - Living Room  
Book "Venereal Fever" by  
Carl Carner hearing notation  
"The Slacks - MARCH 1943 -

found by RB - witnessed by FF Eugene  
observed by SBO

12:55 AM - Bookcase -

1 copy Posters Twilight of World Capitalism  
1 copy Notes from the Hollows by Julius  
Zachlich - New Century Publishers  
found by RB  
observed by SBO

2:15 PM - Letter from Port Wm J. Murphy  
Det 14 853rd Ord. Serv. Co. Ave.

Roswell N.M. PM 9/2/42

found by RB in front basement room  
observed by SBO in wooden box

2:25 PM Manila envelope addressed  
To Al Slack Bldg 110  
containing cut up aerial  
photographs of docks, R.R. yds etc 29 pgs

65-4307-1-B-6(8)



Page 2

found by JCB in front basement room  
observed by JCB among notes &  
Harry Held in wooden notes

2:30 PM March 7, 1943 issue  
of the Worker

found in front basement in wooden box  
among notes & Harry Held by JCB  
observed JCB

2:55- Expanding wallet

labeled "A.B.'s stuff"

contains numerous blueprints, cards & papers

(contains statement (typed) signed

Jack Brown - listing background

except - "Have been connected with the

Revolutionary movement since 1925.

Organized left wing children's group  
in Phila.")

found in cabinet in front

basement by JCB on bottom shelf

observed by JCB

3:10 PM

Page 2

Letter from D. Green

311 S. Western St., L. A. Calif

P.M. 3/18/48

found in front basement cabinet bottom shelf  
by NS

Observed by JG

3:25 - Manila folder containing

handwritten account of  
meeting with "al"

found in front basement cabinet bottom shelf  
by NS

Observed by JG

3:40 Manila folder containing

reports of work done at Eastman  
Kodak on recovery of silver

found in front basement cabinet bottom shelf  
by NS

Observed by JG

5:10 PM

Letter from Doc to  
Harry & Butch - contains  
statement re getting what  
they need for Barthman - dated 11/5/45  
found by AB in lower left  
hand desk drawer in HG's room  
opened by JRO



Date Received 5/22/50

From Harry Gold  
(Name of Contributor)

6829 Kender St., Phila  
(Address of Contributor)

By T. Scott McLeod, Jr. (N.Y. Agent)  
(Name of Special Agent)

To Be Returned Yes No ( )

Description: Receipt for items

RECEIVED DURING WINTER SEASON

OF GOLD'S RESOURCES

File No. 65-4311

65-4311

65-4307-1B-6 (9)

(THE 8 ITEMS  
ARE ALSO CONTAINED  
HEREIN)

Peru (Trans. Schedule & copy of Sub. for sent NY 8-8-50, re: [unclear])

65-4307-1B-6(9)

Philadelphia, Pennsylvania  
May 22, 1950

Received from HARRY GOLD this date the following items which he voluntarily furnished to Special Agents of the Federal Bureau of Investigation, during a search of his premises at 6823 Kindred Street, Philadelphia. This search was conducted with the written consent of Mr. GOLD;

LIST OF ITEMS

1. Travel folder entitled, "SANTA FE THE CAPITAL CITY DIFFERENT IN THE LAND OF ENCHANTMENT."
2. Time table of the Pennsylvania Railroad containing schedules for Washington, Philadelphia, New England and Montreal dated July 29, 1945.
3. One sheet of paper containing the following writing: "St 8-3962."
4. One small card containing the following penciled writing: "Mike" "Walnut 4776." On the reverse side of this card is written in pencil, "One St 8-3962."
5. A piece of 3 x 5 paper containing the following pen and ink writing, "J. H. Bowen, Building 600, Naval - Air Exptl. Sta. U. S. Naval Base, Philadelphia 12, Pa."
6. A 3 x 5 card with the following writing in ink, "Brothman, A. -- Associates, 114 E. 32nd St., New York City, N. Y. Wrote letter - September 4, 1945, Murray Hill - 3-9670."
7. One locker key number B219.
8. One letter dated February 8, 1946 to Mr. Harry Gold from Pennsylvania Alcohol and Chemical Corporation.

Last Item

*Richard E. Brennan*  
*Special Agent in Charge*  
*John L. Miller*  
*Special Agent*

This is to certify that on May 22, 1950 at Philadelphia, Pa. Special Agents of the Federal Bureau of Investigation, U. S. Department of Justice, at the time of conducting search of my premises at 6823 Kindred Street, Philadelphia, obtained the above listed items. I further certify that the above represents all that was obtained by Special Agents of the Federal Bureau of Investigation, U. S. Department of Justice.

*John L. Miller*  
*Richard E. Brennan*

*Harry Gold*

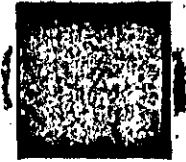
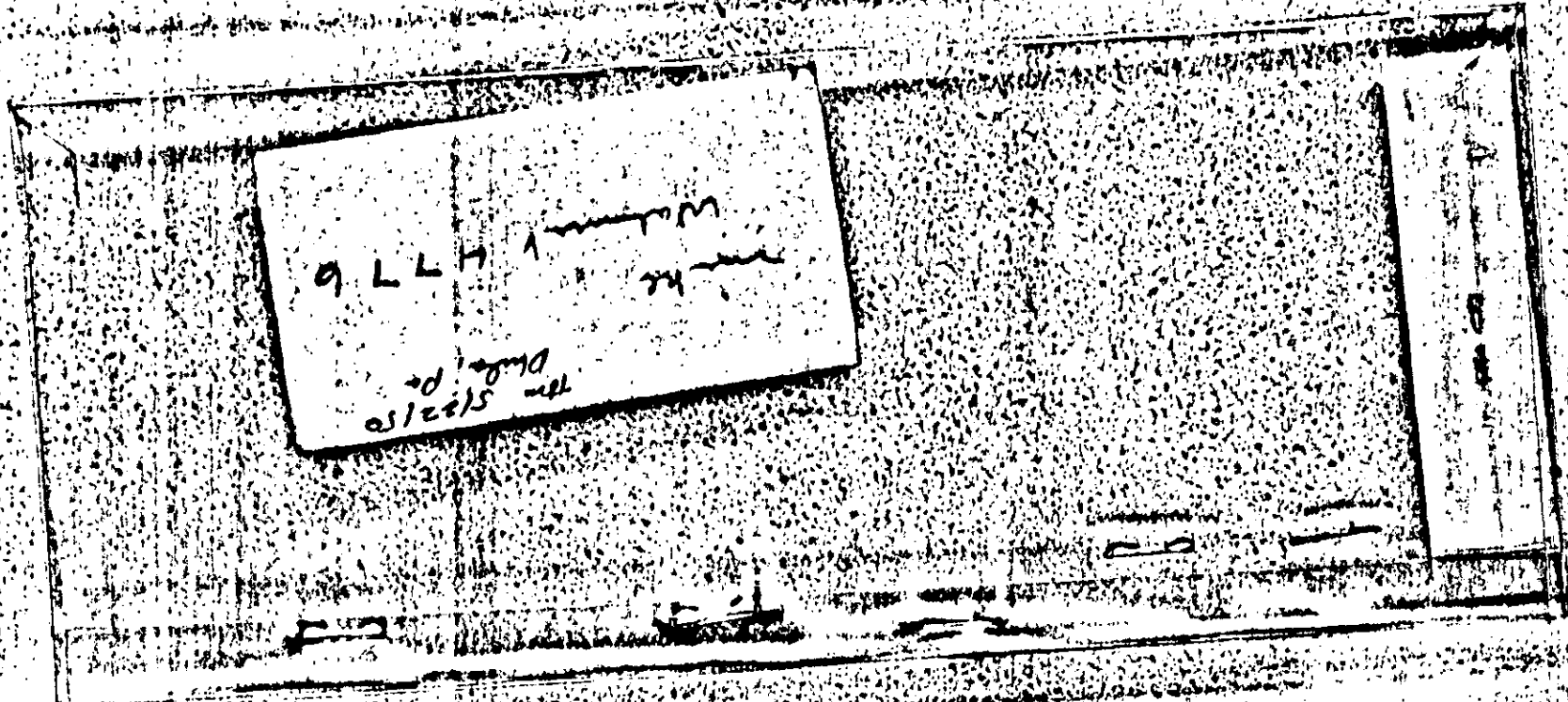
65-4307-1B-6(9)

65-4302-1-B-6(9)

47  
8-3962

51-150  
rem 5/15  
p. 100





J. H. Bowen  
Bldg 600 - Naval Air Cycl. Sta.  
U. S. Naval Asst.  
Philadelphia 12, Pa.

65-4307-1B-6(3)

Brothman - A. - Associate

114 East 32<sup>nd</sup> Street

New York City, N. Y.

wrote letter 2 Sept. 4 - 1945

Monday 14th - 3 - 9670

from 5/22/50  
Phila, Pa

65-4307-1-B-6(9)



PENNSYLVANIA SUGAR COMPANY

1037 N. DELAWARE AVENUE

PHILADELPHIA 25, PA.



Mr. Harry Gold,  
6823 Kendred Street,  
Philadelphia, 24, Pa.

65-4302-18-6(9)

# PENNSYLVANIA ALCOHOL & CHEMICAL CORPORATION

PHILADELPHIA 25, PA.

ALCOHOL PLANT  
PHILADELPHIA, PA.

QUAKER BRAND INDUSTRIAL ALCOHOLS  
SOLVENTS AND PHARMACEUTICAL CHEMICALS

CHEMICAL PLANT  
CARLSTADT, N. J.

Feb. 8, 1946.

ADDRESS REPLY TO  
1037 NO. DELAWARE AVE.  
PHILADELPHIA 25, PA.

Mr. Harry Gold,  
6823 Kendred Street,  
Philadelphia, 24, Pa.

Dear Mr. Gold:

We are pleased to advise that with the deduction of \$4.68 made from your pay due the week ending February 3rd, 1946, we have secured full settlement of an original \$500.00 loan made to you Feb. 9th, 1945.

According to our records, this final settlement completes any and all contracts made between our good selves.

Sincerely,

PENNSYLVANIA ALCOHOL & CHEMICAL CORPORATION

  
Cashier

JAW:h

Date Received 6/6/50

From \_\_\_\_\_  
(Name of Contributor)

\_\_\_\_\_  
(Address of Contributor)

By SA James E. Holmes  
(Name of Special Agent)

To Be Returned Yes ( )  
No ( )

Description: Notes taken by SA Holmes during interview of  
Miss Mary Catherine Lantry on 6/6/50

File No. 65-4307-1B-6 (10)



File 1949 ASKED TO  
MANNY

WOULDN'T TALK ABOUT  
POLITICS.

PAST - SAID HAD BEEN IN  
NEW MEXICO, SANTA FE

BOSTON

NEVER SAID SO - CAL RIVER

SUGAR CO. - OWN INTERESTS  
COCA-COLA BOTTLING CO.

PLAYS, BALL GAME.

HAVEN'T

ACS MEETINGS - PHILA,  
ARMY 2ND WK.

65-4307-1B-6(10)

Mr. Arthur Cornelius, Jr.

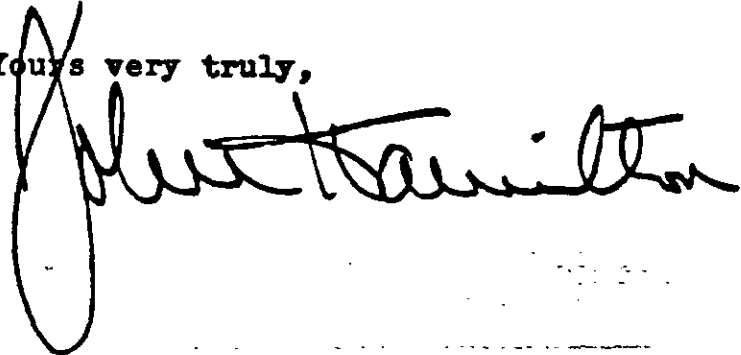
-2-

June 5, 1950

In view of what I have written I must, therefore, ask that Mr. Gold should not be requested to sign any statements heretofore made which are unsigned at the moment or which may be taken hereafter without the opportunity of either myself, or Mr. Ballard as my associate, reviewing such statements before signature. In this connection I should like also to have the opportunity of reviewing statements which he may have previously signed. This request is in no way intended to prevent or preclude any further interviews between Mr. Gold and yourself or your associates as long as he sees fit to give further information.

A copy of this letter is being sent to Mr. Gold at Holmesburg.

Yours very truly,



JDMH:H

Encl 6(11)

Oct 6/50

MARY CATHERINE LANNING,  
TECHNICAL ASSISTANT TO DR.  
CHEN.

CHEN LAB - PHILA GEN

Sept 1948.

POLITICS.

LAST FEB 1950

SHOULDN'T

FUCHS.

Nov. 1948 went out 1 hr

2 months. August 1949.

ASC (AM CHEMICAL SOCIETY)

ATLANTIC CITY. SEPT.

3 wk.

ACADEMY OF MUSIC

THEATERS, HEARST  
MUSIC + ACS MEETINGS.  
SEPT 1949, 3 DAYS.

1948, JN DR CHEMIST  
IN DR CHEMIST

LEFT JUNE OF 1949.

QUET

DR STIEGER,  
DR HELPS,

220 E. CLIVDON, TENN.  
SENNARS TOWN 9-0422

3330 CHESTNUT

EV 6-3065

BUSINESS SEYMOUR CHEN'S LAB

KI 5-2051 2 CH

50 PHILA

MOMABEL DOUGHERTY

2 GIRLS DEPT FR 15th PHILA.

HARRY TALKER ABOUT  
LEVER MET. STOPPED FOR  
HARRY LIVING MTC CASE  
LEFT. DEPT 1049



MEET — JOSEPH —  
AUG 1949, <sup>SUNDAY</sup> MORNING  
9 O'CLOCK

BADTL ~~VIEW~~ DEN  
VOORT

R. BILL POLIS,  
EASTERN REGIONAL  
RESEARCH.

UP PA. 1941 ON  
1944 MASTER

BRITHMAN and  
his wife ~~and~~  
JAN — AUG 1949  
from the area — turn on  
this time, VACATION  
last AUGUST 1949.  
Overnight,

Left job — Chester —  
Humboldt N.Y before  
coming to Philadelphia

<sup>note: with child in</sup>  
LIVE IN <sup>NOTE</sup> NEAR WASHINGTON CHAS  
STANTON = HOME  
PERMANENT HAVE —  
ROXBOROUGH, PA  
VERY FRIENDLY  
WANTED HIM TO WORK  
CHEMICAL  
GOOD FRIENDS.

ENGAGED AT XAVIER U.  
MARRIED.

PHILA. DANCER.  
HITHER. CELIA

FLOYD  
LANE WALKS WITH  
CRUTCH.

CHEMIST - WORKS AT  
STERN

ACS

2 A.M.

ATLANTIC CITY

LANKEAU RESEARCH

LAB, FOX CHASE, PA.

35 and

ONAME DENT

DEW

5' 4" LOW HEEL SHOES

DARK RED HAIR

BLUE EYES

BUILD HEAVY

FAIR COMPLEXION

20-21

BUILD - MEDIUM PLUMP

LIGHT - COLORED WIG

ALWAYS GLASSES

TEETH SLIGHTLY PROTRUDING

DEW

Date Received June 16, 1950

From John Hamilton  
(Name of Contributor)

(Address of Contributor)

By [Signature]  
(Special Agent)

To Be Returned No

Description: Ltr to SAC from Solli Attorney  
John Hamilton dtd June 5, 1950.

File No. 65-4307-1-B-6(11)

65-4307-1-B-6 (C)

LAW OFFICES

PEPPER, BODINE, STOKES & HAMILTON

2225-42 LAND TITLE BUILDING  
PHILADELPHIA 10, PA.

WASHINGTON OFFICE  
WARNER BUILDING  
501 13th STREET, N.W.  
WASHINGTON 4, D. C.

CABLE ADDRESS  
"PEPFI"  
PHILADELPHIA  
RITTENHOUSE 9-8884

June 5, 1950.

GEORGE WHARTON PEPPER  
WILLIAM B. BODINE  
THOMAS STOKES  
ISAAC A. PENNYPACKER  
JOSEPH S. CONWELL  
JOHN D. M. HAMILTON  
FREDERICK H. SPOTTS  
PHILIP L. LEIDY  
ERNEST SCOTT  
JAMES ALAN MONTGOMERY, JR.  
THOMAS E. CONNER, JR.  
JOSEPH S. CONWELL, JR.  
WILLIAM CARSON BODINE  
CLEMMENT J. CLARKE, JR.  
RICHARD BENSON  
JOHN SAILER  
HAROLD SCOTT BAILE  
JAMES A. MOORE  
WILLIAM H. KEENAN  
FRANK C. P. MOLLIN  
JAMES J. DAVIS, JR.  
HUBERT P. EARLE  
AUGUSTUS S. BALLARD  
JOSEPH F. TILGHMAN  
RICHARD C. BORLIEN

Mr. Arthur Cornelius, Jr.,  
Special Agent in Charge,  
Federal Bureau of Investigation,  
Widener Building,  
Philadelphia 7, Pa.

Re: United States v. Harry Gold

My dear Mr. Cornelius:

In my only interview with Harry Gold which was held as you know on Thursday, June 1st, he stated to me that it was his desire to give the Federal Bureau of Investigation all of the information concerning his activities in connection with the charges which have been laid against him. Having accepted the appointment by the Court in the spirit that I could be of public assistance as well as carrying out a duty, I encouraged Mr. Gold in his determination to make a full disclosure of the facts. In accordance with this viewpoint I advised you I had no objection as Mr. Gold's attorney to the continued conferences between him and the agents of your Bureau.

As you are aware, Mr. Gold's decision to plead guilty to the charges carries with it not only the admission of guilt, but also the question of the severity of the sentence imposed by the Court. Under all the circumstances my primary interest as his legal representative must be directed to the latter. In this connection I am concerned with statements which he might make to you or your associates, not as to the factual contents thereof, but to the extent that he may inadvertently through the misuse of language or otherwise acknowledge a motive or intent in connection with the commission of the crime other than that which he contends impelled him.

*Rec'd from def. clt. by hand  
9:05 AM. T. S. Miller advised  
by phone 9:15 AM. 6/6/50.*

LM

SEARCHED	INDEXED
SERIALIZED	FILED
JUN 6 1950	
FBI - PHILADELPHIA	

65-4307-1-B-6 (11)



Mr. Arthur Cornelius, Jr.

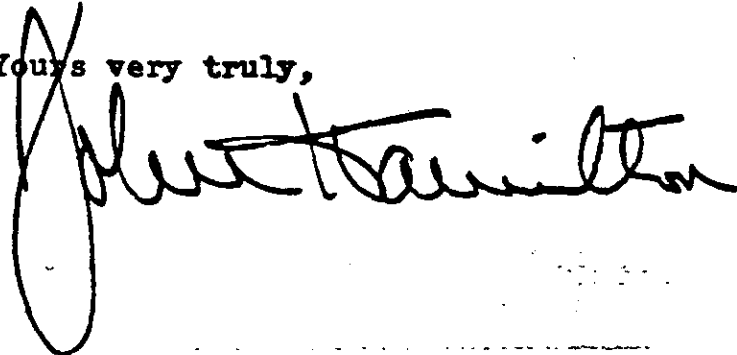
-2-

June 5, 1950

In view of what I have written I must, therefore, ask that Mr. Gold should not be requested to sign any statements heretofore made which are unsigned at the moment or which may be taken hereafter without the opportunity of either myself, or Mr. Ballard as my associate, reviewing such statements before signature. In this connection I should like also to have the opportunity of reviewing statements which he may have previously signed. This request is in no way intended to prevent or preclude any further interviews between Mr. Gold and yourself or your associates as long as he sees fit to give further information.

A copy of this letter is being sent to Mr. Gold at Holmesburg.

Yours very truly,



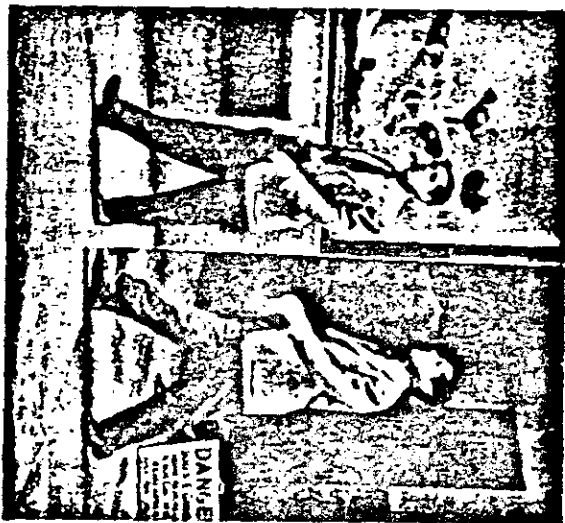
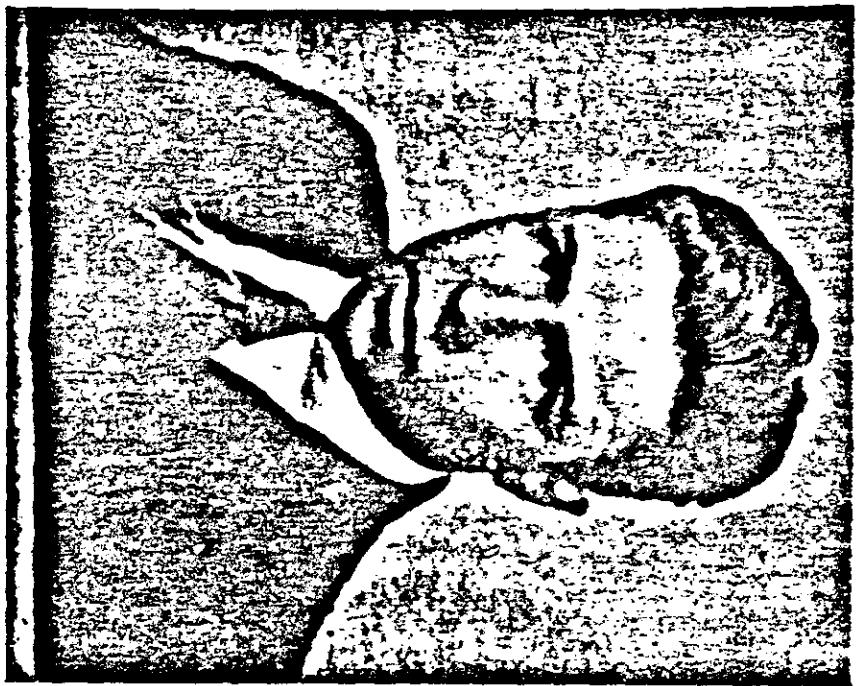
JDMH:H

Encl 6(11)

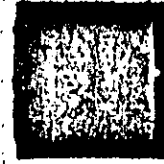
44-38861-285

Date received 5-28-52  
Name Mr. [illegible]  
Address [illegible]  
City [illegible]  
State [illegible]  
Contributor [illegible]  
By [illegible]  
To Be Returned [illegible]  
No. [illegible]  
Agent [illegible]

Set photo which shows photo 2  
65-4307-1864 (Antel Anderson)  
Johnson and  
Tom Adams



65-4307-1-B-6(12)

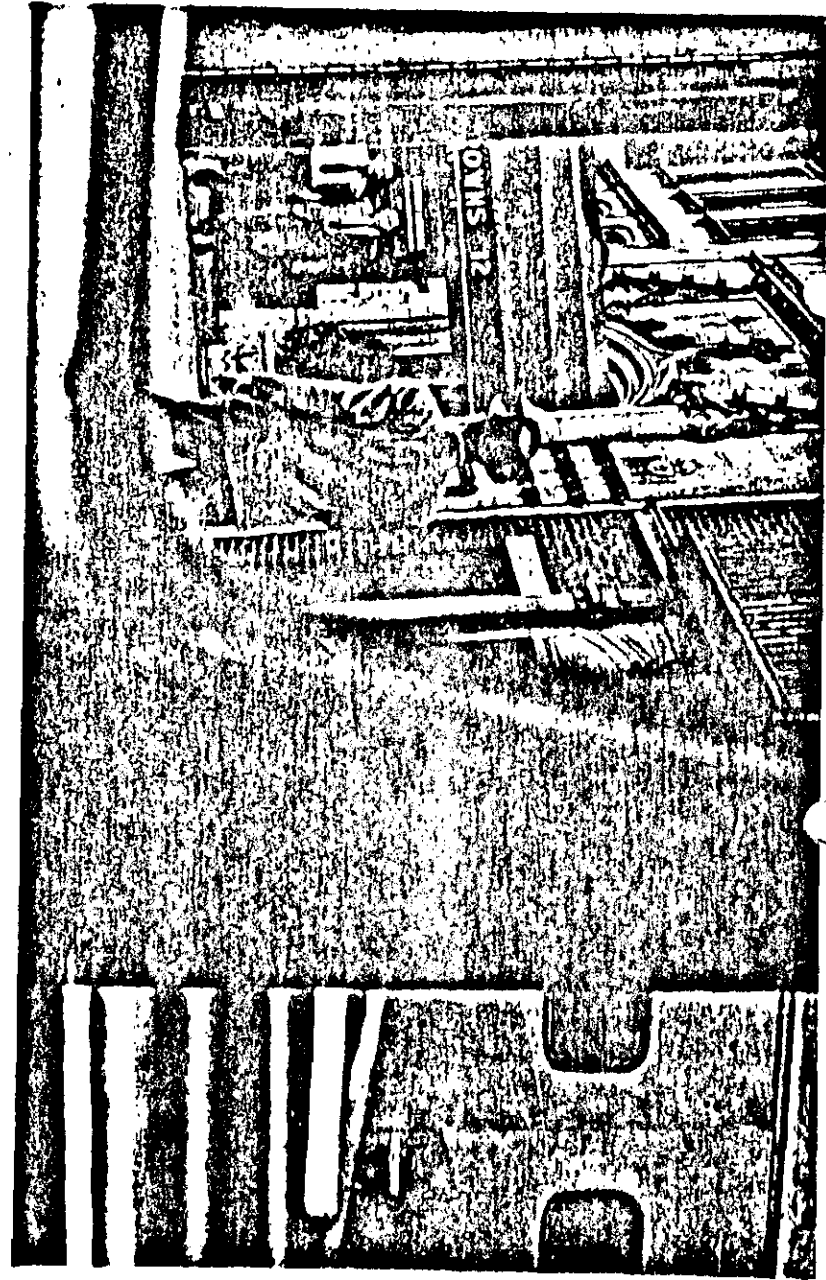
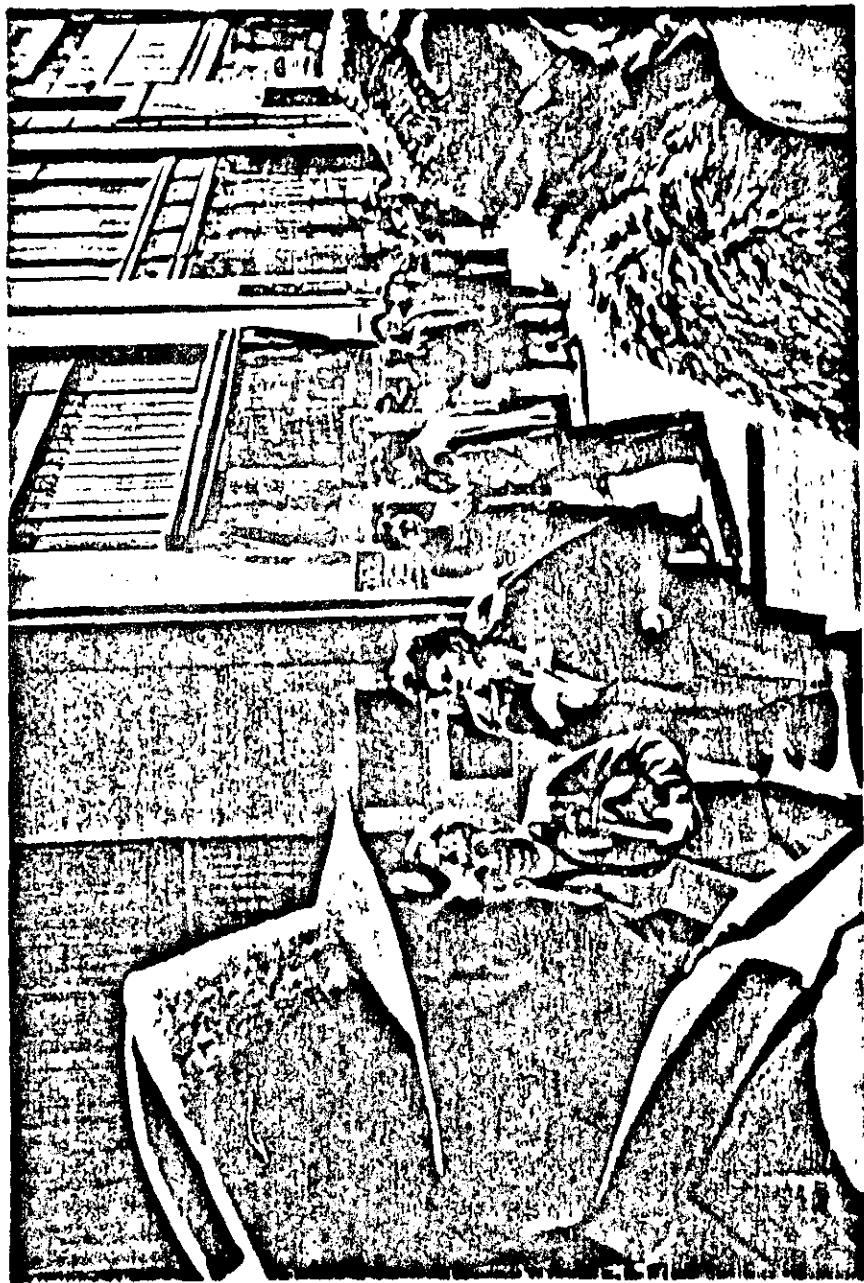


~~7-8-1-96-909-224~~  
61-4307-1-8-6(12)

65-4307-18-6(12)

LAA ADOMIAN





ANATOLI ANTONAVICH YAKOVLEV  
and  
LAN ADOMIAN

ADOMIAN on left with light suit coat.

LS-4307-1B(12)  
~~LS-4307-1B~~

LAN ADOMIAN  
A. A. YAKOVLEV

LS-4307-1B-6(12)  
~~LS-4307-1B-6(12)~~



65-4307-1B-6(12)

LAR ADDOMIAN  
A.A. YAKOVLEV

65-4307-1B-6(12)  
~~10-805-75-143~~



Date Received May 29 1950

From W. J. King  
(Name of Contributor)

(Address of Contributor)

By W. J. King  
(Name of Contributor)

To Be Returned Yes  
(Yes or No)

Description:

12 photos of K. J. King & 120

File No. 65-4307-1-B-6(13)

see serial 246

HARRY Gold, Exp R

PHILA, VI

65-4318

ALBANY PHOTOGRAPHS

Received 5-29-50

Albany

4107  
-- 65-1646

✓ BOYER, PHILLIP ✓

✓ ELLIS, RUDOLF ✓

✓ GREEN, ROBERT, L ✓

✓ INSLERMAN, FELIX, A

✓ JOHNSTON, ROBERT, C ✓

✓ KATZ, GEORGE, M

✓ LASH, ROY, E

✓ MASTRIANI, WILLIAM, J

✓ MCCLATH, MALCOLM, A

(Looks like usual Amer who worked at Eastern Hotel)

✓ NOVIKOFF, ALEX, B

✓ RICE, ED

✓ RIVERS, CHARLES

✓ SHELDRIK, GEORGE

✓ STANKO, WALTER

✓ ZEPETELLO, MATE

65-4307-1-8-6(13)

Henry Gold EgoR

PHILA, PI

65-4328

ALBANY PHOTOGRAPHS

Albany

65-7646

Received 5-29-50

BOYER, PHILLIP

ELLIS, RUDOLPH

GREEN, ROBERT, L

INSLERMAN, FELIX, A

JOHNSTON, ROBERT, C

KATZ, GEORGE, M

LASH, ROY, E

NASTRIANI, WILLIAM, J

MCCLAIN, MALCOLM, A

NOVIKOFF, ALEX, B

RICK, ED

RIVERS, CHARLES

SHELDRIK, GEORGE

STANKO, WALTER

TRPETILLO, NATE







Altany file O-1299

O

George Sheldrick (alias)  
born Union City, New Jersey Jan 3, 1913

5 ft 11 inches

175

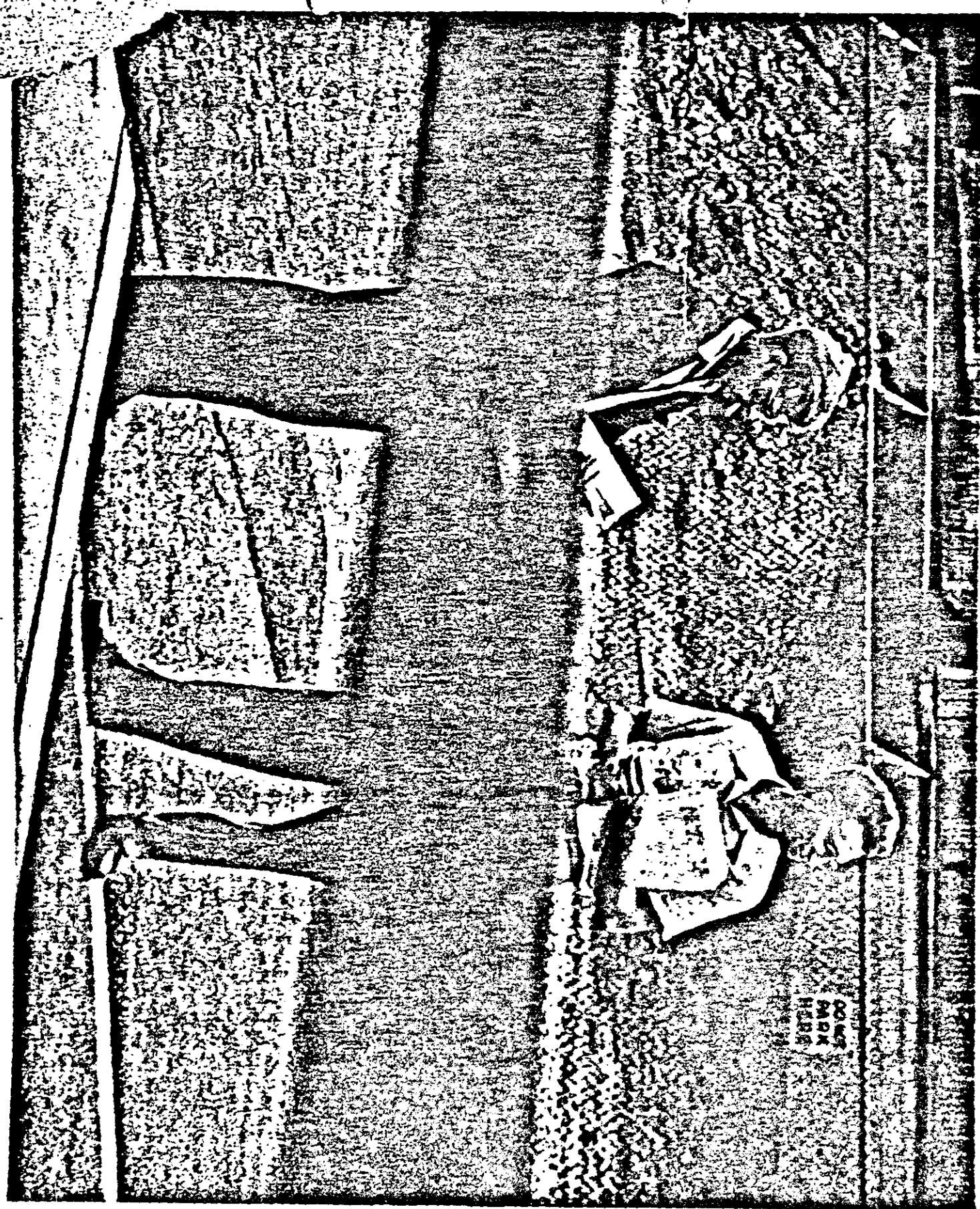
hair brown

eyes brown

has been in Syracuse as C. P. organizer since 1940, was  
arrested at Albany in 1948.

resided 111 Standard St, Syracuse in 1942

65-9307-1-B-6(19)



ALBANY 100-5340-1877

ROBERT CLARK VONNOSTON

Born 11/1/17, East Haven, N.Y.

6'

175

Slender build

Medium complexion

Blonde curly hair, worn combed back

Gray eyes (wears glasses)

B.S. in Chemistry from R.P.I., Troy, N.Y. - 1938

Employed Anaco, Birmingham, Ala., 1/9/40 - 4/9/42, and 12/12/45 - 6/21/47

In U.S. Army, 1/7/43 - 12/12/45

65-4307-1B-6(13)





ALEX B NOVIKOFF

PHOTO TAKEN 1937

born 2-28-1913 - Russia  
5' 10"

170 lbs.

eye Brown

hair - Black

Beard dark, Heavy  
build medium.

occ - professor - biology  
visited Marshallan, 27-  
in 1942 and 43.

100-11578-1a1 Albany

65-4307-18-6(13)

96

Charles  
Rivers

Albany 100-8687-1A3

Born 10/25/1895, New York, (last name)  
5' 11"

175

Slender build

Brown eyes

Black hair

Dark complexion

Irish accent

Employed Bridgeport, Conn., and  
9/1/44, as 1st. sergeant - by 1st. in Apr.  
since last date 10/1/44 - date

ROBERT L. GREEN, WAS.

born 9-24-15, Pittsburgh, Pa.  
5' 9"

162 lbs

eye blue

hair Brown, curly

Complexion light

build medium

Chemist & Ceramic engineer  
was at E. E. Fisher. 1943 to  
1947, whereabouts from '40 to  
'43 not indicated.

65-4307-18-6(13)

Albany

100-8593-1A1



12069



40244

Phillip Boyer

Am. Loco Co., Schenectady

taken prior to 48.

born May 5, 1919 Brooklyn N.Y.

5'10

165

eyes blue

hair brown

eyes light

employed American Locomotive Co.

Schen June 42 to Dec 48.

was in Schenectady several months prior to June 42 at a Vocational school.

65-4307-1-86(13)

Albany

100-1585-1192

Walter Stanko

WALTER STANKO

Albany

100-9664 6964

Stanka (6964)

born 3-30-13 - Czechoslovakia

5'11 1/2

125

hair brown

eyes grey

continuously employed at

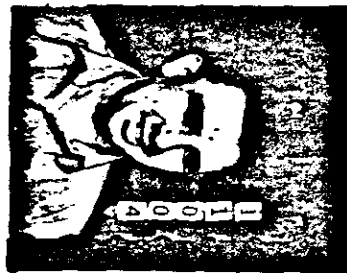
Endicott Johnson Corp.

Endicott N.Y., 1920 to present

65-4307-1-86(13)

Address YEA, Schenectady, NY  
 Born 3/26/22  
 Birthplace Lyndhurst, N.J.  
 Height 6' 1 1/2"  
 Weight 207 lbs.  
 Complexion Ruddy  
 Nationality Jewish  
 Occupation Employed in  
 Electronics Dept. G.S.  
 Soc. Sec. No. 050-16-1194  
 File No. 100-9069

*was engineer at G.E. Schenectady  
 from June, 1942 to 12-46, at  
 G.E. Syracuse from 12-46 to 5-47.  
 Was in C.C. N.Y. 38 & 42.*



Nov. 1948  
 Roy Lash  
 Albany 100-8539



Rudolph Ellis  
 photo taken Nov. 48  
 Albany file 100-9469



(C) 7-91-406A-57

C. 1



WILLIAM JOHN MASTRIANI  
born 4/19/30, Schenectady,  
N.Y.  
5'6"  
170 lb.  
Slender build  
Brown hair  
Medium complexion  
Naturally left foot  
Employed C.E. Schenectady  
1938-1939 and 1940-1941

3

65-4307-1B-6(13)

AL. 10-6596-1A1

Ray Edward Zach.  
born 8-13-04, Vermont  
5-8  
185 lbs  
eye blue  
hair brown  
complexion ruddy  
employed continuously  
at C. E. Schenectady  
since 1939 as lathe  
operator.

Rudolph E. Ellis  
born 6-6-14, Jersey, N.J.  
5'10"  
162  
eye brown  
hair brown  
complexion light.  
was machine gardener,  
C.E., Schenectady from  
about 1942 to present time  
& that was in N.Y.C.

65-4307-1B-6(13)

65-4307-1B-6(14)

FELIX AUGUST INSLERMAN

Born 7/11/1910, New York City

5'8" /

165

Brown eyes

Brown hair

Light complexion

Medium build

Employed Glenn L. Martin Co.,

Baltimore, 1938-2/27/42

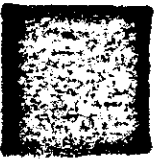
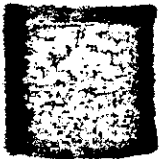
Employed Republic Aircraft

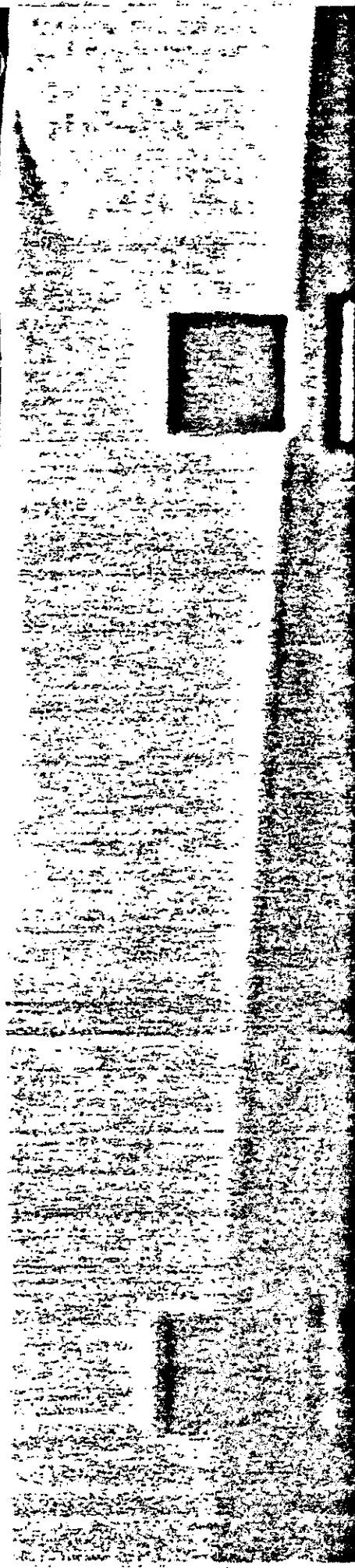
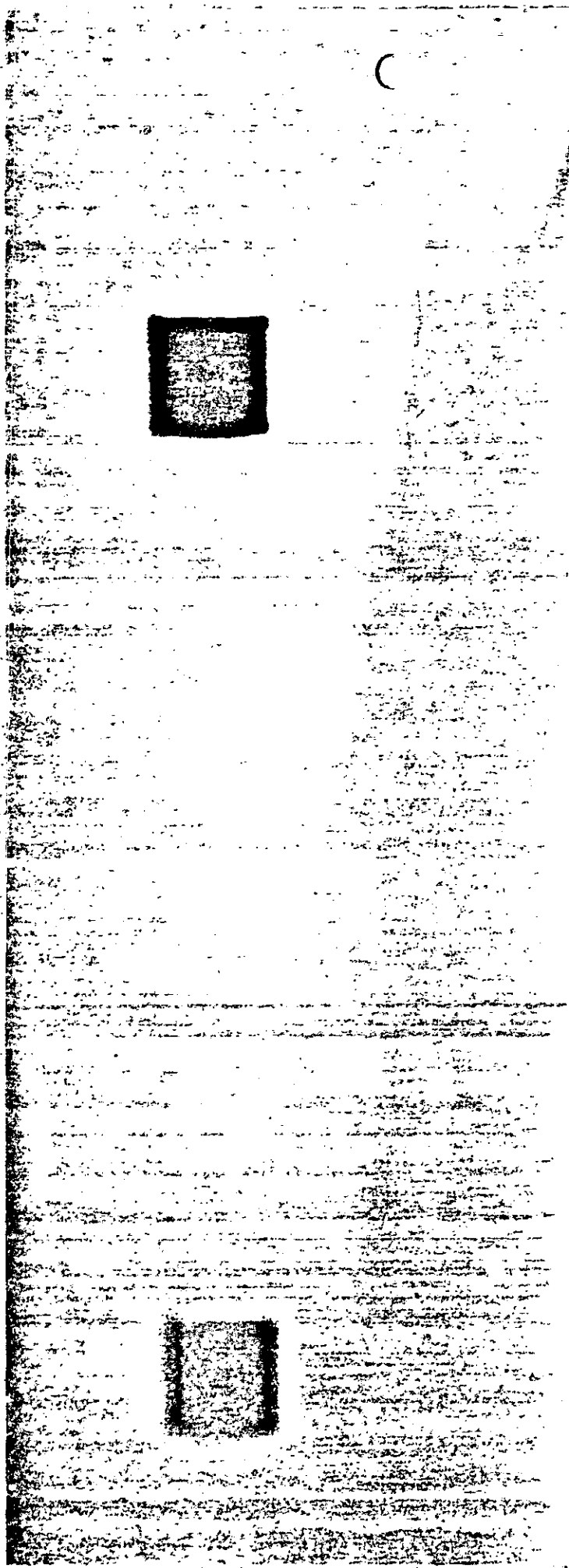
Corp., Farmingdale, L.I., 2/1942 -

6/1946

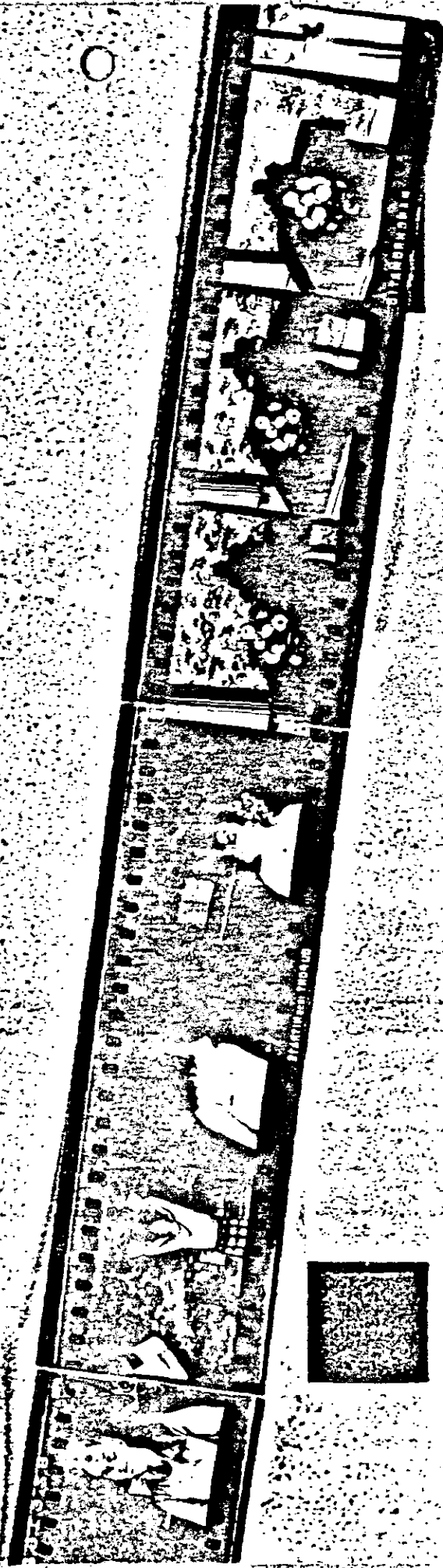
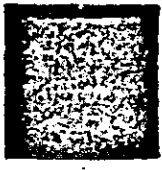
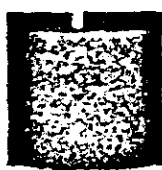
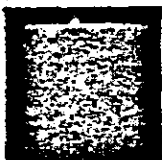
65-4307-1B-1 (13)

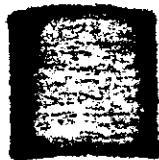
ALBANY 100-11620











Date Received 6-6-50

From WFO  
(Name of Contributor)

(Address of Contributor)

By \_\_\_\_\_  
(Name of Special Agent)

To Be Returned Yes ( )  
No ( )

Description:

One photo each of Olga Boricornea Gardin  
and Melina Lagerweist Gardin

File No. 65-4307-1-B-6(f)(4)

2004298

WFO 65-4307-1-B-6(14)  
ENCLOSURE  
[Signature]  
65-4307-1-B-6(14)



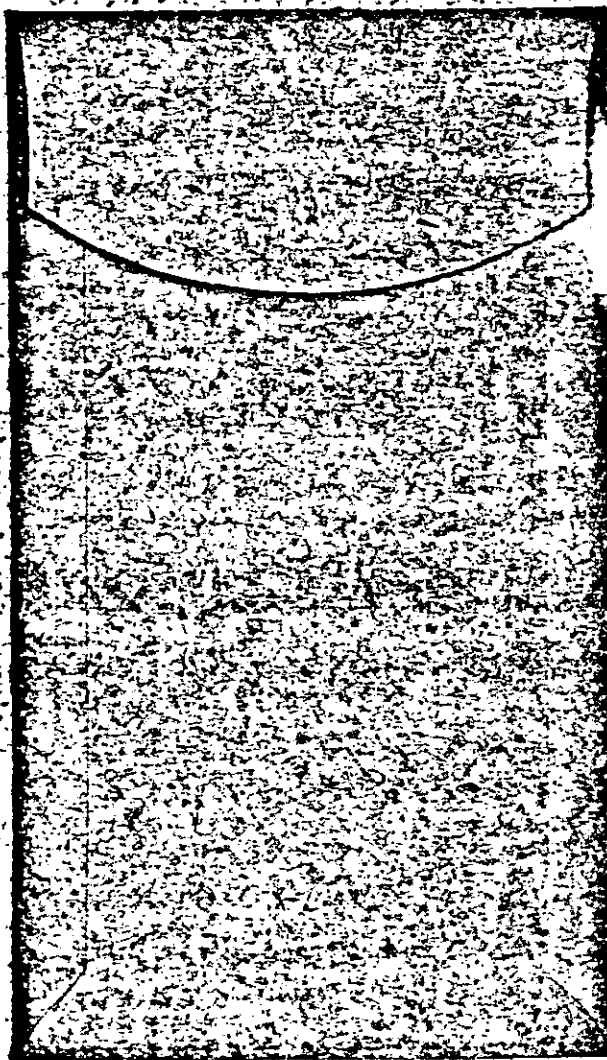
PRVDINA, Olga  
Borisovna



PRVDIN, Vladimir  
Sergeevich

65-4307-1-B-6(14)





WFO 65-5125

170

65-4307-18-6(14)

~~WFO 65-5125~~

170

65-4307-1-86(14)

65-4307-1-B-6(15)

Date Received 6/1/50

From Director

(Name of Contributor)

(Address of Contributor)

By

(Name of Agent)

For Be Returned

(Yes) (No) ( )

Description

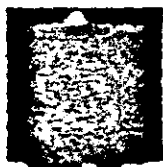
Photos of individuals investigated in connection

with the Caddy case

File No. 65-4307-1-B-6(15)

206

See serial 206

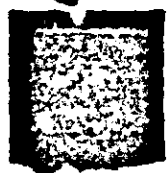


65-4307-1-B-6(15)



DAVID GORDON LUNAN

CS-4307-1B-6 (17)



FREDA LINTON

CS-4307-1B-6 (15)

ELMA WOIKIN

CS-4307-1B-6 (15)





one LAVRIENTIEV

65-4307-1B-6(15)

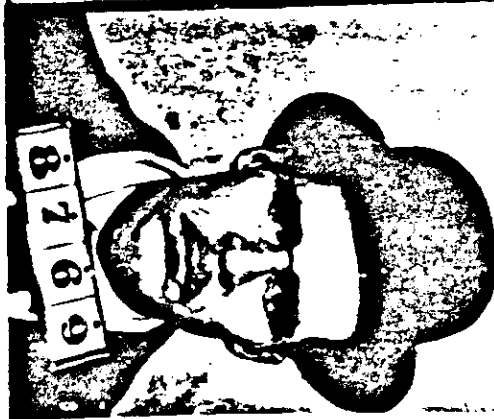
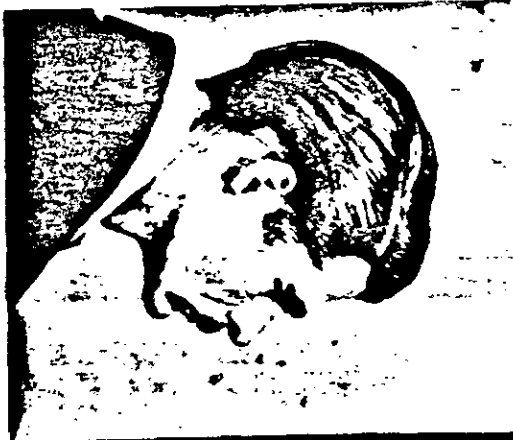
65-4307-1B-6(15)

DAVID GORDON LUNAN

65-4307-1B-6(17)

GEORGE ZARUKIN

65-4307-1B-6(17)



HENRY HARRIS

65-4307-1B-6(17)

MIKHAIL IVANOVICH GALKIN

65-4307-1B-6(17)

EDWARD WILFRED MAZERALL

65-4307-1B-6(17)

EDWARD WILFRED MAZERALL

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ABRAHAM ROSENBERG

65-4307-1B-6(15)

JACK ISADOR GOTTHEIL

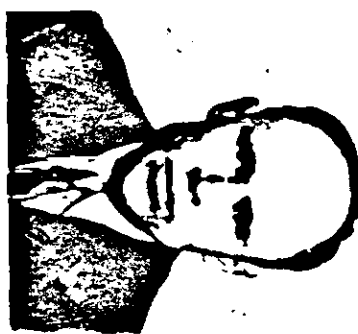
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HENRY HARRIS

65-4307-1B-6(15)

DAVID SHUGAR

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ALFRED I. SOGIN



MIKHAIL IVANOVICH GALKIN

IVAN KROTOV

65-4307-1B-6(17)

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JACK ISADOR GOTTHEIL

VITALE PAVLOV

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ISRAEL HALPERIN

BENJAMIN COHEN?

65-4307-10-6 (15)

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PAVEL PETROVICH MERALIOV

65-4307-1B-6 (15)

LOUIS NORMAN SUKLOFF

ALEXANDRE FARAFONTOV

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65-4307-1B-6 (15)



RALPH AND BOYER

HAROLD SAMUEL GERSON

LS-4307-1B-6(15)

LS-4307-1B-6(15)

WILLIAM HELPERIN

LS-4307-1B-6(15)

Samuel Saul Burman

Israel Halperin

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ARTHUR C. STEINBERG  
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*John Gurland*

John Gurland  
as of 5/23/45



DR. A. N. MAY

VASILY BOGOV

65-4307-18-6(15)

PETR MOTINOV

65-4307-18-6(15)

65-4307-18-6(15)

65-4307-18-6(15)

DR. ALLAN NUNN MAY

65-4307-18-6(15)

W. H. PAPPIN

65-4307-18-6(15)



PRASKOVIA M. SERVIN

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BUNIA WITCZAK

65-4307-1B-6(15)

MATT S. NIGHTINGALE

KATHLEEN WILLISHER

65-4307-1B-6(15)

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AGATHA CHAPMAN

LS-4307-1B-6(15)

DORIS JURIST

LS-4307-1B-6(17)

AGATHA CHAPMAN

LS-4307-1B-6(17)

KATHLEEN WILLSHER

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SAM CARR

LS-4307-1B-6(15)

JAMES SCOTT BENNING

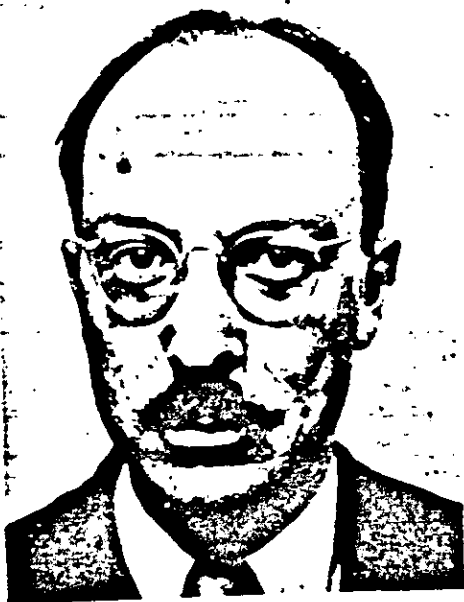
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NIKOLAI ZABOTIN

CS-4307-1B-6(15)

SAM CARR

CS-4307-1B-6(15)

ERIC GEORGE ADAMS

CS-4307-1B-6(15)

NORMAN VEALL

CS-4307-1B-6(15)



FREDERICK W. POLAND

65-9307-1B-6(15)

*Ignacy Samuel Witczak*

65-9307-1B-6(15)

65-9307-1B-6(15)

SERGEI M. KUDRIAVTSEV

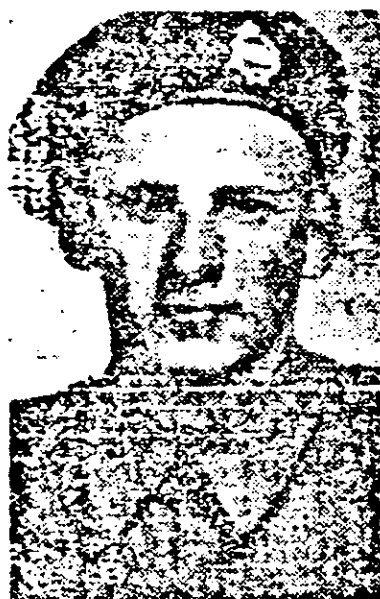
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C  
DR. JOHN SOBOLOFF

65-4307-18-6(15)

O  
FRED ROSE

65-4307-18-6(15)

GUARDSMAN JOSEPH LEVITT

65-4307-18-6(15)

(PHILLIP) DUNFORD P. SMITH

65-4307-18-6(15)

Date Received January 7, 1957

from Director  
(Name of Contributor)

(Address of Contributor)

By   
(Name of Special Agent)

To Be Returned Yes ( )  
No ( X )

Description: Photostat copy of page argued  
submitted by Julius Rosenberg, May 26, 1950, London

File No. 65-4307-128-6 (18)

307

Wormwood Scrubs Prison  
London, England

I, Emil Julius Klaus Fuchs, a prisoner in Wormwood Scrubs, a penal institution in London, England, do hereby make this statement, freely and voluntarily, with no promises or threats having been made to me, and I have been specifically informed that I do not have to make any statement of any kind whatsoever.

This statement is made to Hugh H. Clegg, who has been identified to me as an Assistant Director, and to Robert J. Lamphere, who has been identified to me as a Special Agent, both being identified as officers of the Federal Bureau of Investigation, United States Department of Justice of Washington, District of Columbia, U.S.A. I am making this statement in the presence of the two aforesaid officers and William James Skardon, whom I know to be an officer of the Security Service of the United Kingdom.

I was born in Russelsheim, Germany, on December 29, 1911, and became a naturalized citizen of the United Kingdom on August 7, 1942. I came to England arriving on September 24, 1933. In May, 1941, I accepted employment at the University of Birmingham in England as a scientist on atomic energy research development. When I learned of the purpose of this research work, I decided and planned to furnish information concerning this work to and for the benefit of the Union of Soviet Socialist Republics, hereinafter referred to as the Soviet Union, and, in order to effectuate this plan, in early 1942 I personally contacted an individual in England, whom I knew to be active in communistic affairs/favorable *and ready* to the Soviet Union. I made known to him my availability and readiness to furnish confidential and classified information and my occupational affiliation which gave me access to such types of information relating to atomic energy research. The person so contacted arranged for me to meet another individual, also in England, whom I later personally met in 1942. On one occasion in 1942 I met this latter individual, known to me as Alexander, at the Soviet Embassy in London, England. During my meetings with Alexander, I furnished to him in 1942 information including written data concerning atomic energy research which I knew to be classified and confidential, and for the purpose of such information being furnished to the Soviet Union as an aid in promoting atomic energy research and

*Klaus Fuchs*



development in and for the Soviet Union. Through and at the instigation of Alexander, I established personal contact with a woman whose name I do not know and whom I met near Banbury in Oxfordshire, England, sometime in 1942. I delivered confidential and restricted information to this woman, for the continued benefit of the Soviet Union, from 1942 until near the end of 1943. My atomic energy research employment was under the suspicions of the British Government.

When I learned in 1943 that I was being officially assigned to go to the United States as a part of an official British Mission to work with the Manhattan Engineer District on atomic energy research development, I informed my contact, the aforesaid woman, of this assignment and she subsequently informed me how to make contact in the United States with an individual for the purpose of continuing my activities of furnishing, for the benefit of the Soviet Union, additional confidential information relative to atomic energy research in the United States. Her instructions were to the effect that I should on a certain day at a specified place in New York City, New York, U. S. A., meet an individual who would be wearing gloves and would have an additional pair of gloves in his hands, while I would have a ball in my own hand. This meeting was, according to her instructions, to be made on a street in New York City at a stated time. If the meeting was not effected initially as planned, a further meeting would be attempted at a designated later date.

In keeping with instructions, I proceeded by ship to the United States with other members of the official Mission from England, arriving at Newport News, Virginia, on December 3, 1943. Within three or four days I arrived in New York City, taking up residence first at the Taft Hotel, later at the Barbizon Plaza Hotel, and later at an apartment at 128 West 77th Street. I took up employment as a scientific consultant as a part of the British Mission, assigned to the Manhattan Engineer District, and engaged in research development and activities relating to atomic energy.

As agreed upon during the meeting with the aforementioned woman in England, I went to the designated meeting place on the lower East Side,

*Klaus Fuchs*

Manhattan, New York City, New York, where, to the best of my recollection, around Christmas 1943, I met an individual at the time and on the day previously agreed upon. He was wearing gloves and carried an additional pair of gloves in his hand and I had a tennis ball in my hand. We exchanged designated identification words and I gave my correct name and he used the name of Raymond in making initial introductions. Raymond expressed his pleasure at being chosen for such an important assignment. He suggested to me to make certain, in keeping future meeting assignments, that I was not being followed. During this or the next succeeding meeting with Raymond, atomic energy and the development of an atomic bomb were discussed by referring to these terms in a general way.

I was motivated in keeping this meeting by a desire to aid the Soviet Union. I considered Raymond's status as an agent intermediary, acting for and in behalf of the Soviet Union in keeping with the plans aforementioned, which were initiated in England.

At and during this first meeting with Raymond in New York City, we agreed upon an early subsequent meeting and the time and place for such meeting, in order that I could furnish to Raymond highly confidential and classified documents or information concerning atomic energy research and development under the control of the Manhattan Engineer District.

A subsequent meeting between Raymond and myself, in keeping with arrangements, was held in Manhattan, New York City, in the vicinity of the Queensboro Bridge approach as we walked under this bridge during this meeting, which was held after dark. This meeting occurred during the early part of 1944.

On another occasion during the first half of 1944, I met Raymond, by prearranged agreement between us, on the street near a subway station, possibly the "Museum" station on Central Park West in New York City. Raymond usually suggested the meeting places, but I believe I suggested this meeting place because it was near my place of residence on 77th Street.

Another time, by prearranged agreement, in 1944, I met Raymond in the Bronx, New York City. This meeting was near a cinema, I believe,

*Alvin Finkel*

on Grand Concourse in the vicinity of 159th Street or 161st Street.

I believe I recall another personal contact between Raymond and myself in Queens, New York City, in 1944.

There were held about five or six meetings between Raymond and myself in New York City during the period from sometime shortly after my arrival there in December, 1943, to sometime prior to my departure in August, 1944, from New York City for Los Alamos, New Mexico, for official assignment on the atomic energy project there.

There was one other arrangement for my meeting with Raymond in 1944 in Brooklyn, New York, on a street location near some large buildings and where there was heavy traffic. This designated place may be on Eastern Parkway, but the meeting did not occur as I failed to see Raymond, although I was there.

At all the meetings between myself and Raymond no other person accompanied me and I observed no one who seemed to know Raymond. Most of these meetings between Raymond and myself were arranged by us to occur after dark.

Upon my official assignment with members of the British Mission, under the overall control of the Manhattan Engineer District in New York, I, with other scientists, was engaged in research in connection with the development of certain methods for the production of fissionable material. In connection with this, I prepared certain classified documents as part of the British Mission prior to my departure for Los Alamos, New Mexico, in August, 1944. I personally furnished all of the original drafts of these documents directly to Raymond, with the intent and purpose that he serve as an intermediary in the eventual transmittal of such documents to and for the benefit of the Soviet Union. These documents were delivered to Raymond by me in groups of one or more at most of the aforementioned prearranged meetings, which I had with Raymond in New York City during 1944.

In addition to the foregoing during my meetings with Raymond, as

*Klaus Fuchs*

above mentioned, I furnished to Raymond information which had come to my knowledge, by virtue of my official employment and work under the overall control of the Manhattan Engineer District. This information, which I furnished to Raymond, included the fact that a large production plant was to be built in the Southeastern part of the United States for the production of fissionable material, and that this plant was to use two different processes, which I named, in the production of fissionable material. I also orally advised Raymond of the identities of certain leading research personnel on atomic energy projects.

In keeping with official instructions received by me, I was transferred to Los Alamos, New Mexico, where I arrived on or about August 14, 1944, for work on the atomic energy project there under the control and overall supervision of the Manhattan Engineer District. At Los Alamos I was provided a place of residence on the United States Government restricted area in a dormitory and took up employment as a physicist in the Theoretical Division of the Laboratory. By virtue of my work, my associations in connection with my work and the availability of confidential and classified official documents, I developed, received and had access to confidential, classified information of an official character. I remained in such employment at Los Alamos until about June 16, 1946. During this period of official employment I made a visit to the home of my sister, Mrs. Kristel Heineman, and her husband, Robert Heineman, on Lakeview Avenue, Cambridge, Massachusetts. I arrived at my sister's home on or about February 13, 1945, and remained there on a visit until about February 22, 1945.

Shortly after my arrival in Cambridge I was visited by Raymond, who asked me for additional information concerning my work at the Atomic Research Project at Los Alamos. I told him I would prepare in writing this material and made arrangements to meet him a few days later in Boston. At the agreed upon time I did meet Raymond in Boston, Massachusetts, at a place fairly near the Charles River and near a large public-type of building, reasonably close to what is known as North Station. I there delivered to Raymond a written report, which I had prepared in longhand consisting of about six or more pages, in which I had set forth confidential

*These arrangements were made without the knowledge of my sister and her husband, who were not present during my discussion with Raymond and had no knowledge of its purpose.*  
H.F.

*Klaus Fuchs*



and classified information and data which I had received in connection with my employment at Los Alamos. This dealt with the whole problem of making an atomic bomb from fissionable material as I then knew the problem. This document included information known to me regarding the method of detonating an atomic bomb and other highly secret and technical information regarding the construction of an atomic bomb. I wrote this statement in my own handwriting and in English, and I intended that it should be delivered by Raymond through channels so as to reach physicists in the Soviet Union who would understand the technical language of the report.

I again met Raymond in Santa Fe, New Mexico, in June of 1945, the arrangements for this meeting having been made at the Boston meeting, mentioned above. We met on Alameda Street, and I then got my car and we drove out a lane to a deserted spot where we continued our meeting. At this meeting I delivered to Raymond a written report, which I had personally prepared in longhand. This included a description of an atomic bomb, which was to be tested at Alamogordo, a sketch of the bomb and its components with important dimensions indicated, and a written description of the various important technical aspects of the bomb. I orally informed Raymond, while we were in the car, the types of explosive to be used in the detonating of the bomb, the fact that the Trinity test was to be made, with the approximate site indicated, and information as to the intensity of the explosion measured in relation to TNT explosive force.

By prearrangement I again met Raymond in Santa Fe a few months later, I believe possibly in September. At this meeting I delivered to Raymond another written report, which detailed information concerning the Trinity test, which had been held at Alamogordo. I also furnished in the report certain other technical information which I had obtained from my work on the Atomic Research Project at Los Alamos. I fully intended in transmitting this report to Raymond that he should, in turn, transmit it so as to reach the Soviet Union.

I returned to England in the summer of 1946 and took up employment at the Atomic Research Project at Harwell, England. After my return to England, I was again in contact with persons whose real identities I do not know, but whom I contacted with the intent of furnishing to the Soviet Union information concerning atomic research developments. To these persons I furnished additional information concerning atomic research, which I had

*Klaus Fuchs*

come in possession of, both in the United States and England, including certain research being made on the problem of detonating a hydrogen bomb. My last contact in this respect was in February of 1949.

I have examined photographs shown to me by Assistant Director Hugh H. Clegg and Special Agent Robert J. Lamphere, both of the Federal Bureau of Investigation, and I have identified two of the photographs as the individual I knew under the name of Raymond. I have indicated my identification by signing my name and the date on the reverse sides of these two photographs.

I have personally and carefully read this statement consisting of seven single-spaced, typewritten pages and I do hereby state that all the above information is true and correct to the best of my knowledge and belief.

Signed this the 26th day of May, 1950.

Klaus Fuchs

Witnesses:

Hugh H. Clegg  
Hugh H. Clegg, Assistant Director  
Federal Bureau of Investigation

Robert J. Lamphere  
Robert J. Lamphere, Special Agent  
Federal Bureau of Investigation

William James Skardon  
William James Skardon, Officer  
Security Service, United Kingdom

Date Received \_\_\_\_\_

from \_\_\_\_\_  
(Name of Contributor)

\_\_\_\_\_ (Address of Contributor)

By \_\_\_\_\_  
(Name of Special Agent)

to Be Returned Yes ( )  
No ( )

Description: Carbon copy 7

File No. 65-4307-1-B-X(11)

United States of America v. Harry  
Red. 100-100000 May 31, 1950  
June 1, 1950

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA

vs.

HARRY GOLD

Philadelphia, Pa., May 31, 1950  
June 1, 1950

J. H. Nicholls  
OFFICIAL COURT REPORTER  
UNITED STATES DISTRICT COURT  
ROOM 3054 - U. S. COURT HOUSE  
PHILADELPHIA 7, PA.

65-4307-1-B-6(17)

65-4307-1B-6(17)



1

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA

vs.

HARRY GOLD

Philadelphia, Pa., May 31, 1950.

Before HONORABLE JAMES P. McGRANERY, J.  
(Sitting as United States Commissioner)

PRESENT: Harry Gold.

George Brodbeck,  
Clerk of the District Court.

JOSEPH C. REING,  
United States Marshal.

JOHN LEAHY,  
Deputy United States Marshal.

(IN CHAMBERS)

THE COURT: Mr. Gold, I received a call from Dr. Baldi, from Holmesburg, and he said that you asked him if you could not come down and have a chat with me about, I think, the appointment of counsel for you.

MR. GOLD: That is right.

THE COURT: Is there something that you wanted to say to me confidentially, or is it all right, do you mind these other gentlemen hearing?

MR. GOLD: I believe these gentlemen can hear it.

I want to obtain an attorney, but the difficulty is that I do not have very much in the way of money. I believe I have somewhere in the neighborhood of about \$170 in the Philadelphia Saving Fund Society, and there are several hundred dollars in bonds, uncashed War Bonds. In addition to that, there is about \$4,000 that is due me from my employer in New York, back salary. It has been over two years since I left there and practically the hopes for obtaining that are pretty dim, because the firm is not in very good shape, never was.

I understand that my family has been making efforts to obtain a lawyer for me, but I am very anxious not to cause them any further expense, or difficulty, or anything of that nature whatever. You see, something of this nature could easily wreck their finances.

I appreciate that they have been very loyal in standing by me, but I do not want to cause them any additional expense, at all, so I am in a sort of a quandary.

There is also one more matter, I do not know whether I should mention it now or not, and that is that if an attorney is appointed I would like him to understand very clearly that I must continue to give information to the F.B.I. freely, that he is to put no restrictions whatever on that, none whatever, regardless whether he thinks it is damaging to me or not.

Also I would very much like that he be a man, if possible, with no radical connections whatever, no leftist or pinkish background of any kind whatsoever.

The third thing is, and I do not know whether I am correct in making this statement here at all, he is to understand that I am pleading guilty; not, however, with respect to one particular matter. I did not honestly ever in my life mean any harm to the United States. Now I believe -- I don't recall the charge -- there was -- there is some phrase there which had to do with reference to intent to injure and harm the United States. Otherwise I intend to plead guilty.

And that covers it, Judge McGranery. Thank you.

THE COURT: In other words, to sum up what you

have said, it is to the effect that you would like me to appoint counsel, and you would like that counsel to be one whose patriotism itself would be above reproach --

MR. GOLD: Absolutely.

THE COURT: (Continuing) -- and who would have the regard and respect of both the Court and the bar, and the public?

MR. GOLD: Yes, sir. I don't want a man who will make a show. If he is to do anything for me I want him to do it on strictly legal ground.

THE COURT: Now, I think there is no question in my mind but what you are entitled to counsel, there is no question in my mind but what you are entitled to the very finest that we have to give you. You, however, will be tried, not in this District, but probably, from what I understand, in Brooklyn. I am not sure, however. That is part of what would appear right now, that information is in Brooklyn.

MR. GOLD: I see.

THE COURT: I will appoint counsel for you. I just want to think it over as to whom I should appoint, and I do not know what effect that would have on the court that would ultimately try your case, what effect that might have upon that court. It may be that that court would want other counsel. I should think that if we do appoint counsel now, and there is



no question in my mind but what you are entitled to counsel at least for the present, that probably would continue through. I do not know. I have no assurance to give you on that, but I would like in that case for you to meet with whatever counsel I should think would be one of real standing at our bar, and talk to him, and discuss your matter with him, and tell him what you told me. You two might be able to hit a basis for handling this matter.

Of course, the remuneration, the money end of it, would be out of the question, I think the man in your particular case would have to take it as a public duty.

MR. GOLD: Well, might it at least be possible, if I had the money, I would gladly pay him, but if he should take it, and he would be a Philadelphia attorney, that is, a man from this area, he would undoubtedly encounter expenses, the minimum of which would be travel to New York --

THE COURT: Well, we can find some way of handling that, but tell me this, did you have anybody yourself in mind, any particular counsel of your choice?

MR. GOLD: No, I did not. I know very little of attorneys at all, except what fragments would come in my mind through reading the newspapers, and I cannot offhand think of anyone.

THE COURT: I will speak to somebody --

MR. GOLD: I have been thinking, but I cannot think of anyone at all.

THE COURT: I will think of someone and give you the opportunity of talking to him tomorrow, perhaps.

Will it be all right to bring him down tomorrow afternoon, Mr. Reing?

MR. REING: Well, Your Honor, we have a pretty heavy list tomorrow, we have a lot of arraignments.

Sure, we can bring him down.

We have sentences.

THE COURT: Yes, you can bring him down. It is important that he have counsel promptly.

How about three o'clock?

MR. REING: That will be all right.

THE COURT: Suppose we do that.

I will have somebody down here and I will be here myself, too, and see what sort of satisfactory arrangement we can make.

MR. GOLD: Yes, sir. Thank you very much.

THE COURT: You can be assured I will appoint him from what I consider to be among the most able we have in our bar here in Philadelphia.

MR. GOLD: Thank you very much, Judge McGranery. I appreciate it.

THE COURT: You are quite welcome.

And you say that in all likelihood you will be entering a plea of guilty, you think?

MR. GOLD: Yes, I shall.

THE COURT: Of course, you will have to wait for that indictment, too.

MR. GOLD: Yes, sir.

THE COURT: And see what that looks like.

MR. GOLD: May I ask one more question? I am still confused about the legal procedure. I appear in your Court the 12th of June, is that correct?

THE COURT: Yes, and that may all be altered, I guess, after you have counsel and he talks to you. I prefer for him to say to you what your rights are.

I have told you now that your rights are that you do not have to talk to anybody, and you do not have to say anything to anyone, and the Marshal will not permit these newspaper men to interfere with you in one way or another.

MR. GOLD: That is fine.

THE COURT: Unless you want to make some statement.

MR. GOLD: No, I have no statement to make.

THE COURT: If you do not want to make any there will not be any made, other than what very brief statement

I will make in the public interest as to why you were here.

MR. GOLD: They are entitled to that.

THE COURT: There will be no misunderstanding about that. Otherwise there will be nothing said.

Tomorrow afternoon at three o'clock I will arrange for one of our lawyers to talk to you and see if he will represent you, and then from there in we will have to take care of that.

MR. GOLD: That is very fine. All right, sir. Thank you.

THE COURT: You are quite welcome.

(The hearing was closed.)

(The following statement was made to the members of the press:)

THE COURT: Well, gentlemen, Harry Gold came in. He wants the Court to appoint counsel for him. He wants the counsel to be one whose patriotism is unimpeachable, and who has the respect and the regard of the Court, the public, and the bar. He wants to have the right to continue to cooperate with the F.B.I., and that he will insist upon.

He said that he is destitute of funds excepting for a small account he has in one of the local banks and a very dubious claim for back wages with a company in New York.

He appreciates the loyal support he has



received from his father and his brother, but does not want to be any additional financial burden upon them.

While he will not be tried in this District, the charge which keeps him in custody is so grave in character that I feel it incumbent upon me to furnish him with counsel, with the most capable of counsel, and I have, therefore, told him that I would consider it during the balance of the day, consider the name of the person I would appoint and would have him speak with whomever I designate tomorrow afternoon, and if satisfactory I would make the official appointment.

That is about all.

MR. BRODBECK: You understand, gentlemen, that this call was made from him to the Judge.

MR. MESSARAS: From Dr. Baldi to you; is that right?

THE COURT: Yes.

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

May 31, 1950

Court Reporter

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA

vs.

HARRY GOLD

Philadelphia, Pa., June 1, 1950

Before HONORABLE JAMES P. McGRANERY, J.  
(Sitting as United States Commissioner)

PRESENT: HARRY GOLD

JOHN D. M. HAMILTON, ESQ.

AUGUSTUS S. BALLARD, ESQ.

GEORGE BRODBECK, Clerk of the  
District Court.

JOSEPH C. FRING, United States  
Marshal.

(IN CHAMBERS)

THE COURT: Mr. Gold, after you talked to me yesterday about your request for counsel to represent you, I have given it a great deal of thought. I said to you then that I was convinced beyond any doubt that you were entitled to the benefit of counsel, and that you were entitled to the benefit of the most able counsel we had to give you, because of the gravity of this situation. You told me then that you did not want anybody appointed as counsel who had any pinkish, or leftist or radical connections, and, in fact, you wanted someone whose patriotism was above reproach.

MR. GOLD: Yes, sir.

THE COURT: I also told you that after I came up with my recommendation to you I would give you the opportunity of meeting with the gentleman and talking with him, and, if satisfactory with you, I would make the official appointment.

I think that the man that fits into your pattern is Mr. Hamilton.

MR. GOLD: Yes, sir.

THE COURT: You probably have heard of him before.

MR. GOLD: Yes, sir.

THE COURT: Mr. John D. M. Hamilton.

MR. GOLD: Yes, sir.

THE COURT: Have you heard of him?

MR. GOLD: Yes, sir.

THE COURT: Mr. Hamilton has already rendered service to his country, he has been the chairman of a great political party --

MR. GOLD: The convention.

THE COURT: -- not of my faith, but it is one of our great parties, and certainly his patriotism is above reproach. His standing at our bar is that of a partner to the dean of the Philadelphia bar, former Senator George Wharton Pepper. I can think of no higher type of man to give you as a lawyer or as one who would have the public confidence, and certainly not only the respect of this Court, but my grateful thanks for his accepting the appointment.

You may feel free to talk to Mr. Hamilton. Your lawyer will be your confidant. What you tell him, that relationship is one that need not be divulged to anyone. You may tell him whatever you want. If you tell him something with respect to your case the relationship between client and attorney is a very confidential one, and need not be and can not be imposed upon.

If you want, you can go over there and talk to him quietly.

I will appoint, together with Mr. Hamilton, with your approval, Mr. Ballard, who is going to be an assistant



for Mr. Hamilton, to do whatever leg work and research would be necessary in connection with the case.

So, if you will, I will ask the marshal to get out of earshot, so you can talk to them and tell Mr. Hamilton whatever you want.

MR. HAMILTON: May we have of record, if it is agreeable, that the client does accept the appointment, and that he has accepted it?

MR. GOLD: Yes, I am very glad to accept Mr. Hamilton as my attorney.

THE COURT: I feel very glad in my own conscience that I have given you the very finest of counsel. I feel that as a Judge whose duty it is to make the appointment, and I feel it with a great deal of pride that he has accepted as a lawyer who has some real respect for our laws.

With that you may go ahead and talk to him.

MR. GOLD: Thank you very much, Judge McGranary.

THE COURT: You are welcome, sir.

(Mr. Gold confers with Mr. Hamilton and Mr. Ballard.)

MR. HAMILTON: Am I right, there has been no formal indictment in this matter?

THE COURT: None whatever. There is an

information lodged, a copy of which you may have; I have it here for you, Mr. Hamilton.

(Mr. Gold resumed his conference with Mr. Hamilton and Mr. Ballard.)

(The hearing was closed.)

(The following statement was made to the members of the press:)

THE COURT: Yesterday I told you that I would think over the appointment of counsel, and I have given consideration to the appointment of counsel in the Harry Gold matter, and, as I said to you yesterday, it was the defendant's own request that the counsel I should appoint, to use his precise words -- and these are quotes from his statement, "That he did not want a lawyer who would make a show; that he have no radical connections whatever, no leftist or pinkish background whatsoever." That is the end of the quote.

Because of the gravity of the charge and its possible far-reaching international implications it behooves this Court to appoint a lawyer whose patriotism would be above reproach, who has the public confidence and the respect of the Court, and who would have a deep understanding of the Anglo-Saxon principle as stated in our Constitution of every defendant having the right to be represented by counsel of his choice.

With all of these factors in mind, the Court

feels that no one at the Philadelphia Bar more fittingly fits into that description than Mr. John D. M. Hamilton, who is a law partner of former Senator George Wharton Pepper, the dean of the Philadelphia Bar.

Mr. Hamilton has consulted with the defendant, Harry Gold, at my invitation, and has agreed to accept this appointment as official counsel for Gold in the public interest, and for which the Court is grateful to him.

Mr. Hamilton has suggested that I name together with him Mr. Augustus S. Ballard as associate counsel.

Mr. Ballard likewise has the confidence of this Court, he is able, young, and certainly patriotic, and I am glad to comply with this suggestion.

I formally name both Mr. Hamilton and Mr. Ballard as counsel for the defendant.

So any other statement will come from Mr. Hamilton.

MR. BUCKLEY: Was there any other counsel requested?

THE COURT: No other counsel requested.

MR. MESSARAS: In other words, the visit of Colonel Rhoads was not in connection with this?

THE COURT: I have no comment to make on that.

MR. BUCKLEY: Judge McGranery, may I ask a

question?

MISS WHELOCK: May I ask whether Mr. Ballard is in the George Wharton Pepper firm?

THE COURT: Yes, he is in the same office.

MISS WHELOCK: May I ask why the F.B.I., Your Honor, was here, Mr. Cornelius?

THE COURT: Yes, I brought Mr. Cornelius here to have him freely meet with Mr. Hamilton and Mr. Ballard,

MR. MESSARAS: Nothing more than that, just to meet?

THE COURT: That is all.

MR. MESSARAS: Is this all (indicating prepared statement)?

THE COURT: I did add to that about Mr. Ballard.

MR. RYAN: Judge McGranery, will these gentlemen be paid for their services by the Government?

THE COURT: A grateful Government always gives its reward for services rendered some way or another.

You mean seriously, will they get anything for it? No, they will not.

MR. RYAN: Is there any method by which the Government can pay them?

THE COURT: No, it will be in the interest of

the public service,

MR. RYAN: Mr. Hamilton and his associate represent Gold --

THE COURT: That is right.

MR. RYAN: -- in New York where he is tried?

THE COURT: Wherever a defendant is tried the defendant is entitled to be represented by counsel of his choice, not the choice of the Court. You can put emphasis on that. There seems to be some misunderstanding of what the principle of law is.

MR. RYAN: We wondered whether your appointment was for the proceeding in this District.

THE COURT: No, Mr. Gold is the one to determine that now, the relationship between him and Mr. Hamilton and Mr. Ballard.

MR. RYAN: Is the hearing for June 12 still on?

THE COURT: As far as I know.

MR. RYAN: Has he indicated whether or not he will waive and go back?

THE COURT: I think you will have to get that from Mr. Hamilton.



Date Received May 22, 1950

Name Harry Gold, was  
(Name of Contributor)

6823, Kindred St. Phila. Pa.  
(Address of Contributor)

By St. T. Lett Miller

Name of Special Agent

To Be Returned Yes ( )

No (x)

Description

Copy of signed confession of Harry Gold made  
Grand Jury Exhibit #1

File No. 65-4307-1B-6 (18)

65-4307-1B-6 (18)

Grand Jury Ex. No. 1

Philadelphia, Penna.

May 22, 1950

(14-04)

I, Harry Gold, of 6823 Kindred Street, Philadelphia, Pennsylvania, make the following voluntary statement to Richard E. Brennan and T. Scott Miller, Jr., who have identified themselves to me as Special Agents of the Federal Bureau of Investigation, United States Department of Justice. No threats or promises have been made me, and I realize that any statement I make may be used against me in a court of law. I have been advised that I may secure the services of an attorney.

In the summer of 1936 I made several inquiries concerning the Communist Party of the United States. At this time I was employed as a chemist by the Pennsylvania Sugar Company, of 1037 North Delaware Avenue, Philadelphia, Pennsylvania.

In the fall of 1936 I was visited at my home by a man who identified himself as Paul Smith. He said that he understood that I was a chemist, and he thought that possibly I might be interested in aiding in the procurement of industrial information for the Soviet Union. This began a period of industrial espionage on my part which lasted until 1943. My association with Smith was of relatively short duration, during which time I furnished him with some data concerning processes that were being worked on in the laboratory of the Pennsylvania Sugar Company and subsidiaries. This data was as complete and factual as I could make it.

Smith, whose name was obviously false, was followed in succession by two men, one of whom identified themselves as Fred, who had a pronounced Russian accent.

In the early summer of 1938 the possibilities at Pennsylvania Sugar Company had pretty well petered out, and I was several times pressed to try and obtain other sources of information. By this I mean people who could furnish us with technical data. However, in my circle of friends there were none who were even the remotest likely candidate, and so I did nothing. This led to a break of over two years, during which time I attended college in Cincinnati. I graduated in 1940.

On my return to Philadelphia I was again contacted by the people with whom I had worked before. I was called on the phone in July, 1940, and I went down town to see this man, who turned out to be Jacob Golos.

T. S. Miller, Jr.  
FBI - Quaker  
3-22-50  
Phila., Penna.

Richard E. Brennan  
5-22-50

Harry Gold

5-22-50

65-4307-1-B-6 (18)

He again pressed me to continue the work which I had done previously, and I agreed. However, it was pretty sporadic in nature, and, with the exception of the one contact that he gave me, Abraham Brothman, nothing much came of it. I was supposed to get information of a technical nature from Brothman, but very little came of that, simply because he was extremely unreliable in getting material together. He gave me some data on mixing equipment which was practically all his design, and it seemed to me that practically everything he gave me at any time was his own invention or design. Brothman kept pressing me on several occasions, and wanted to know about the possibility of his doing consulting work for the Soviet Union on an open basis, as a private individual, and they acting as representatives of their government to this company, and whenever I mentioned it to the people with whom I was in touch they discounted the idea and wouldn't listen to it at all.

I never told Brothman of my association with the Soviet Union, but I think that he suspected it because of the way that I operated—I introduced myself by another name.

I knew Golos for a very brief time, and he was followed very shortly by a man called Sam about the end of 1940. It was with Sam that my association continued uninterruptedly as a contact. I used to meet Sam almost always in New York. Sometimes, very rarely, he would come to Philadelphia, but usually it was in New York, usually on a street corner that we met. Normally we went for a walk. Sometimes, but rarely, we had something to eat. Sam did not have a Russian accent, but I had an idea he was a Russian.

Shortly after I met Sam he told me that there was not much purpose to continuing this work in general, and that the best thing I could do would be to forget about it, and this state continued from late 1940 until the fall of 1941, after Russia was attacked by Germany. Then Sam called me up, I met him, and he told me that we had to begin an intensive campaign for obtaining information for the Soviet Union. This happened about a couple of months after Russia was attacked by Germany. At that time I made a half-dozen trips to upper New York state, namely, Syracuse, Rochester, and Buffalo. I was to transmit information—I acted as a go-between.

What I did on each of these occasions was to obtain information from someone that I didn't know but who was, I'm pretty sure, an American, a native, and I gave it over to Sam, or sometimes not to Sam but to someone who I did not know by name or anything. I just got it and either I received material whose nature I did not know except that they were very bulky packets, and in a matter of hours, or sometimes even minutes, turned it over to a third person, sometimes Sam. There was one man that I saw twice in Rochester,

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*G. L. Miller, Jr.  
P.O. 2 Justice  
5-22-50 Phila., Penn.*

*Richard E. Brennan  
5-22-50*

5-22-50

*Harry Gold*

one man that I saw twice in Buffalo, and there were two others that I saw once, and I got the definite impression in each case that they were native Americans. Sometimes I travelled with the information from one city to the adjacent one, that is, say, from Rochester to Buffalo before turning it over.

In very early 1944 I was told by Sam that I was to undertake an extremely important effort. This was to be work of so critical a nature that I was to think twice and three times before I ever spoke a word concerning it to anyone, or before I made a move, before I spoke to anyone concerned in it. He didn't elaborate on what the nature of the work actually was but he gave me the details of an arrangement whereby I met Doctor Klaus Fuchs. This meeting took place on the east side of New York on a Saturday. As I recall, the arrangements for actual recognition included the fact that I was to carry a pair of gloves in one hand, plus a green-covered book, and Dr. Fuchs was to carry a hand ball in one hand. I cannot recall whether Sam gave me Dr. Fuchs' name, he may have. In any event, we met in, I believe, late February or early March of 1944. I introduced myself to him as Raymond. He never used the name. He knew it was a phony. He introduced himself to me as Klaus Fuchs.

We went for a brief walk and then took a cab uptown to a restaurant around 3d Avenue in the 50's, where we had dinner, but we did not speak much there. Afterwards we went for a walk, during which we completed arrangements for further meetings. Among these arrangements were:

1. We were to be extremely careful and never meet in a restaurant again.
2. We were only to meet for as brief a period as was necessary to complete whatever we had to do.
3. Each meeting included complete arrangements for further meetings and provisions were made for alternate dates and places, but we were never to meet in the same place twice.

He told me during the first and second meetings that he was with the British Mission working with the Manhattan Engineer Project. He also explained to me the manpower set-up of the British group as he knew it. He told me that they were working on the separation of isotopes, and it seems to me that there was at least employed the eventual utilization of the energy produced by nuclear fission in the form of a weapon. One thing he told me on many occasions was that they worked in extremely tight compartments, and that one group did not know what the other group was doing. This I can verify by the fact that he told me that he thought that there was possibility

G. I. Miller, Jr.  
G. B. P. Jackson  
5-22-50, Phila. Penn.

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Richard E. Freeman  
5-22-50

5-22-50  
Harry Gold

of a large-scale installation for isotope separation projected for future development somewhere, he thought, down in Georgia or Alabama. This, of course, later turned out to be Oak Ridge.

The second meeting with Fuchs consisted of an amplification of our arrangements for meeting and a description by Fuchs of the physical and personnel set-up of the Manhattan Engineer Project. *This meeting was in New York.* (12)

During these first two meetings neither Dr. Fuchs nor I made any direct reference to his supplying me with information, but it was more or less mutually understood that he was to supply me with information from the work he was doing.

The second meeting took place with Fuchs a few weeks following the first one somewhere in Upper Manhattan. Successive meetings took place in a number of widely separated localities, including the Bronx, Brooklyn, Manhattan, and Queens. There were, in all, until the summer of 1944, a total of in the neighborhood of five meetings, on at least two of which occasions I obtained (from Dr. Fuchs) information. This consisted of a number of folded sheets of paper containing (during one brief glance that I took on one occasion) mathematical equations which seemed to concern mathematical derivations. This data I turned over to, I believe, Sam's successor, John.

I would like to add that Sam was succeeded by a man named John shortly after I met Dr. Fuchs. I do not believe that I ever turned any information over to Sam.

On the occasions when I turned over information which I had obtained from Dr. Fuchs, the time interval involved was very short; by short I mean a half-hour at the most.

5-22-50

Harry Gold

G. L. Miller, Jr.  
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5-22-50 Phil. Penn.

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Richard E. Penman  
5-22-50



The exact dates that the information was given to me in New York by Dr. Fuchs I cannot accurately say, except that they were probably between April and June or July of 1944. In August of 1944 Dr. Fuchs failed to show up for his scheduled meeting. This was to be in the vicinity of a movie theater near the Eastern Parkway in Brooklyn. He did not show up for the alternate appointment and I had no means of telling where he had gone, though he had mentioned that he was due to leave for another location. The only information he had was that he thought it was somewhere in Mexico, not New Mexico. John then obtained the information whereby he was once more enabled to get in touch with Dr. Fuchs. He gave me the address of a Mrs. Heinemann in Cambridge, Massachusetts, who is, I believe, Dr. Fuchs' sister. I went to see her in September of 1944. The family was away on vacation. I did see her the second time that I went to Cambridge, which was in the fall of 1944. I told her that I was a friend of Dr. Fuchs; that I had met him in New York; that I happened to be passing through Boston on business and I just wondered if she knew where Klaus was. I used here the same name that I had used on meeting Klaus, which was Raymond. She told me that Klaus was due about Christmas time, was very fond of Mrs. Heinemann's children and he had written her that he would be coming home about that time. She did not tell me where he was except that it was somewhere out west. So, I left an envelope containing a name and telephone number in Manhattan. This name I think may have contained the first name "Jerome" or at least a name with a "J" and was somewhat similar to Kaplun (phonetic). This is not the name. About all that I can say about it is that it evokes a familiar sound - a familiar memory chord.

Early in 1945, John got in touch with me and said that we had heard from Dr. Fuchs. I went up to Cambridge and saw Klaus there. He told me that he was working at a place called Los Alamos in New Mexico, he said some distance from Santa Fe. He also gave me written information at that time and we made an arrangement to meet in June of that year in Santa Fe. This meeting took place in the home of Mrs. Heinemann in Cambridge, Massachusetts, but she was not present at the time of our conversation. The whole meeting was of very brief duration. Before I met Dr. Fuchs on this occasion, I was given a sum of approximately \$1500, as I recall, to offer to Dr. Fuchs, should he need it. I was told to be very diplomatic about this matter so as not to offend him. He turned it down cold. He turned down cold even my tentative offer, so that when I returned to New York, I gave the money back to John, along with the information

G. L. Miller, Jr.  
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 5-11-50 Phila. Penn.

Richard E. Fuchs  
 5-21-50

5-22-50  
 Harry Gold

which Fuchs had given me at this time.

During my vacation in June of 1945, I went to Santa Fe via Albuquerque and met Dr. Fuchs there. He gave me another set of data and we agreed to meet again in late September of the same year in Santa Fe. I took this information back with me to New York and gave it to John. Our conversation there was extremely brief and even there, as when he worked in New York, he was dubious about the possibilities for any real and immediate utilization of atomic energy in the form of a weapon. I do not exactly recall the circumstances under which I turned this information over to John in New York. I traveled to Albuquerque on this first meeting via train to Chicago, then by train to Albuquerque, and finally by bus to Santa Fe. My meeting with Dr. Fuchs was on Saturday afternoon. ~~This meeting was~~ <sup>(4-7)</sup> ~~in the city of Santa Fe.~~ Then I returned from Santa Fe to Albuquerque by bus on the same day. As I recall, I slept in the hallway of a rooming house where those who were unable to obtain hotel accommodations were bedded. I returned the following day from Albuquerque to Chicago and then via Chicago by plane to either New York or Washington and then by train to Philadelphia. This jumbled up method of travel was necessitated by the traveling conditions at that time.

Here, I would like to make the following statement: All of the expenses involved in any of the work that I did were paid for by me entirely out of my own funds. Immediately upon my return to New York, I turned over the information which Fuchs had given me, to John. The next meeting with Dr. Fuchs took place in late September 1945. I again met him in Santa Fe, this time on the outskirts. He had a car, a rather dilapidated affair, which he had borrowed, and we conducted all of our conversation in it. He gave me some information again. Also, he told me he had been present at the initial large-scale trial of nuclear fission at Alamogordo in New Mexico, and also described to me the tremendous wonderment that had descended upon even those who had the most intimate knowledge of the potentialities of the weapon — most especially on the occasion of the dropping of the bomb on Hiroshima. It is my best understanding that he was actually present with the group or certainly near the group that set off the trial bomb at Alamogordo.

6.

5-22-50

Harry Gold

G. I. Miller, Jr.  
2. O. J. Gustave  
5-22-50 Phila, Penn.

Richard E. Brennan  
5-22-50

Dr. Fuchs told me also at this time that he would probably return to England soon but that by paying a call to his sister I could ascertain just when. This statement may not be completely accurate in this sense, it also seems to me that he gave a definite time, about Christmas week of 1945 when he expected to again be in Cambridge.

In early evening I returned by bus to Albuquerque and got an early morning plane from Albuquerque to Kansas City. There, I had to transfer to a train which took me to Chicago and I went from Chicago by way of New York Central to New York. From New York I went to Philadelphia and no more than several days later, turned over the information that Dr. Fuchs had given me to John in New York City. To the best of my recollection, it was out beyond Jackson Heights somewhere in Queens where I turned this information over to John.

Here again, I would like to repeat what I previously said, that this jumbled up method of travel was necessitated by the lack of facilities at that time and heavy travel at that time and was not intended as a means of throwing anyone off my trail.

This was the last time that I saw Dr. Fuchs or obtained information from him.

I made either one or two attempts to see Dr. Fuchs again at the home of his sister. This effort was not successful in that he was still in New Mexico. After the possible second attempt which was in either late January or early February, 1946, my scheduled appointment to report to John did not take place. This was to be at the Earle Theater in the Bronx, New York. I never saw or heard from John again.

In summary, to the best of my recollection, Dr. Fuchs gave me information on five occasions. Two times in New York in the Spring and Summer of 1944, once in Cambridge in very early 1945, probably January and twice in Santa Fe, the first time in June, the second time in late September, both 1945. On each occasion I subsequently turned this information over to John. It is possible, although I doubt it, that Sam received from me the first information which I had obtained from Dr. Fuchs.

During my association with Dr. Fuchs, Sam and John, I fully realized that the information which Dr. Fuchs was supplying me and which I turned over to Sam or John was for the benefit of the Soviet Union. I also surmised that the information concerned the separation of isotopes and the

5-22-59  
Harry Gold

G. L. Miller Jr.  
9. D. J. Justice  
5-22-59 Phila, Penn.

7.  
Richard E. Brennan  
5-22-59

subsequent ~~nuclear~~ fission to release tremendous amounts of energy even in the form of a weapon.

I began the work of industrial spying for the Soviet Union in 1936 with the full realization of what I was doing. I thought that I would be helping a Nation whose final aims I approved, along the road to industrial strength. Particularly, was I taken with the idea that whatever I did would go to help make living conditions far more advanced along the road as we know them here in the United States. To amplify, I felt that the industrial set up of a Nation which had only very recently begun to get any kind of a basic industry going, was so far inferior to what existed in other countries, that anything that I could do would be helpful.

Sometimes I was struck by doubts, twofold in nature;

Number one - Especially early in my association from 1936 to 1938 it seemed that the information I was turning over was exceedingly non-utilitarian but I was always assured that it was well received.

Second, the one fear that troubled me during the entire time from 1936 on was the possibility that in the event of exposure my family, which had no idea, not even the very slightest, of the work I was engaging in, would be completely and horribly disgraced.

This affair grew and as I imagine is the case with dealings of such a nature, I got so involved that even had I wanted to, it would have been extremely difficult to get out. However, I would like to qualify this last statement by saying, while on several occasions I did desire to once and for all stop doing this work, that I never once actually suggested it to any of the people with whom I worked. The longest break in all this time was the two year period when I went to school in Cincinnati, 1938 to 1940.

My reaction to the work that I did with Dr. Fuchs was twofold in nature. On the one hand I felt that as an ally, I was only helping the Soviet Union obtain information that I thought it was entitled to. I was troubled even by this, but I persistently put any thoughts out of my mind and as I have previously said, I was in so deep that I was, to a certain extent, bewildered and didn't know what to do. Secondly, the realization that I was turning over information to another power concerning a weapon was so frightening that the only thing I could do was to shove it away as far back in my mind as I could and simply not think on the matter at all.

To amplify somewhat, what I did except during the periods when I actually had to plan to meet Dr. Fuchs or to transmit what he gave me to

G. L. Miller, Jr.  
F.B.I. - Justice  
5-22-50 Phila, Penn.

8.

Richard E. Brennan  
5-22-50

5-22-50

Harry Gold

John, was to simply blot out of my mind as well as I could any thoughts whatever on the subject. I hoped, ~~and~~ many people do, that atomic energy would never again be employed as a weapon.

I would like to state that so far that I succeed in keeping this whole matter from my thoughts, that some of the feelings I have just stated are more or less recent with ~~me~~ <sup>in the sense that I had only recently given them concrete formulation.</sup>

I would like now to make as absolute a statement as possible concerning the following:

Neither my mother, father nor brother ever had the slightest inkling that I was ever engaged in any work of such a nature, either industrial espionage or the later affair with Dr. Fuchs. This represented a considerable strain to keep concealing from them over so long a period but I did succeed by one maneuver or another and as of even this minute, they have not the vaguest idea what went on. The same applies to any people that I have known and been in intimate contact <sup>with</sup> and have worked side by side with, and have been close friends with, over the period of the last 14 years. This particularly applies to people with whom I worked either in industrial laboratories or more recently, in medical research.

The one possible exception to the above is my former employer and acquaintance, Abraham Brothman and while I surmised that he suspected that I had given industrial processes to the Soviet Union, still he had not the slightest idea of my work with Dr. Fuchs.

I read the above typewritten statement <sup>and</sup> consisting of ~~two~~ <sup>two</sup> pages and have initialed each page and the corrections thereof inasmuch as all my statements therein are true to the best of my knowledge and belief.

Witnessed:  
A. L. Miller, Jr.  
Special Agent  
F.B.I. District  
5-22-50, Phila., Pa.

Richard E. Brennan  
Special Agent,  
F.B.I., Phila.

Harry Gold  
5-22-50  
Philadelphia, Penna.



In addition to the previous nine pages in this statement, I wish to make the following additional statements.

On my final visit to the Heinemann's home in Cambridge, Massachusetts, I very briefly met Robert Heinemann. This is the only time that I ever saw him.

The entire idea of the underhanded work required in the industrial and subsequent spying was always very repugnant to me. I always considered myself as just a worker in a particular field requiring some degree of technical skill and diligence; and I have been most happy when I was just left alone in the laboratory to work. I always looked forward to the time when such actions as I have described in the body of this statement would no longer be necessary. I even expressed that to the people with whom I was in contact, and they agreed. This is not an attempt to shift any of the blame for my actions away from me.

*Richard E. Heuman*  
*Special Agent, FBI, Justice*  
*5-22-50, Philadelphia, Pa.*

*G. Scott Miller, Jr.*

*G.B.I. Justice*  
*5-22-50, Phila. Penn.*

*Harry Gold*  
*5-22-50*  
*Philadelphia, Pa.*

Date Received 5/22, 23, 1950

(Name of Contributor)

(Address of Contributor)

By SA. Tolcott Miller

Name of Special Agent

To Be Returned: Yes ( )

No (x)

Description:

Interview log of Harry Gold May 22, 23, 1950

File No. 65-4307-1B-6 (19)

NY 100-37158-1B-358  
mp

65-4307-1B-6(19)

PLEASE DO NOT REMOVE  
THIS SLIP FROM EXHIBIT  
NY 100-37158-1B 558

Harry Gold

6825 Kendal St.

Phila, Pa

May 22, 1950

10:15 AM - Gold advised Agents R.E. Brennan  
and T.S. Miller "I am the man to whom  
Klaus Fuchs gave his info." thm

10:20 AM - Gold began to get dressed thm

10:35 AM - Agents and Gold downstairs thm

10:37 AM - Gold had glass of orange juice thm

10:40 AM - Out of hands in FBI car driven  
by S.A. Oudiz thm

10:50 AM - Arrive FBI office, William Alley,  
Phila. thm

11:25 AM - Advised he need not say anything,  
anything he does say would be used  
against him & he could call a lawyer thm

11:36 AM - Gold stated his confession thm

11:40 - Coffee - Gold drank black coffee thm

12:30 PM - Miller out thm

12:25 PM - thm

12:35 PM - Henry McInnis on thm

12:36 PM - Gold began dictating statement thm

1:30 PM - Miller out thm

1:33 PM - Miss Luchins out RAB

1:36 PM - Miller in thm

1:37 PM - Miss Luchins in RAB

1:45 PM - Gold asked for telephone to call  
brother after while RAB

2:00 PM - Miller out RAB

2:10 PM - Miller in RAB

2:12 PM - Luchins out RAB

2:15 PM - Cowley in thm

2:30 PM - Jensen in with sandwiches & coffee thm

2:50 PM - McInnis in & out thm

2:59 PM - Luchins in and out thm

65-4307-1B-6(19)



3:04 PM - Cohen out - statement (dictation) complete TH  
 3:20 PM - Begon reading completed part of statement TH  
 3:35 PM - Miller out TH  
 3:40 PM - Miller in TH  
 4:05 PM - Statement signed by Gold TH  
 4:07 PM - Out to Riedel TH  
 4:20 PM - Back to Room 517 - Miller out TH  
 6:30 PM - Miller in TH  
 6:32 PM - Gold called Butler TH  
 7:25 PM - Butler brought in TH  
 7:26 PM - Miller out TH  
 7:40 pm - Moved to next room, 518, - dirty dishes RB  
 7:47 pm - Stone in; dictated receipt for items rec'd from Gold RB  
 7:58 pm - Stone out RB  
 8:18 pm - Miller in; - receipt signed by Gold, latter RB  
 given copy  
 8:29 pm - Brother Joseph Gold in RB  
 8:35 pm - Harry told facts to Joseph RB  
 8:46 pm - Harry told Joseph he could have had lawyer RB  
 but did not want to call one because of distress  
 8:54 pm - Emotional outburst by Harry, said he had RB  
 botched up everything for family  
 8:55 pm - Mr. Cornelius in RB  
 9:01 pm - Harry told Mr. not to discuss case outside RB  
 9:05 pm - Mr. Cornelius out RB  
 9:10 pm - Gold told Brother he was not being substantiated in RB  
 any way shape or fashion  
 9:10 pm - Harry Gold told Brother he was deeply involved RB  
 in Puck's case & was a "Shmuck"  
 9:45 pm - Jensen out RB  
 10:00 pm - Jensen in RB  
 10:08 pm - Joe. Gold & Jensen out RB  
 10:20 pm - Joe. Gold, Jensen, Cornelius in; - Brennan out RB  
 10:24 pm - Brennan in - Joe. Gold, Jensen & Cornelius out RB  
 10:35 pm - Brennan out RB  
 10:36 pm - Brennan in RB  
 10:37 pm - Jensen & Miller out RB

- Page 3 -

10:42<sup>PM</sup> - Jensen in Ry  
 10:52 - Miller in - requested permission to bring Hineman  
 in of Harry Bell - permission granted. Ry  
 10:55 - Miller out. Ry  
 10:58 - Miller in - asked Bell if he would be  
 willing to ask Hineman a few questions. Ry  
 10:59 - Miller out. Ry  
 11:17 - Brennan out Ry  
 11:20 - Brennan in Ry  
 11:22 - Miller in with Mr Gordon -  
 Bell is quite sure he has seen him  
 before. Mr Gordon not quite sure. Ry  
 11:24 - Miller out with Mr Gordon Ry  
 11:54 - Hergenstein in Ry  
 11:56 " out Ry  
 12:05 AM Miller in Ry  
 12:06 AM Miller, Brennan, Bell & Jensen out. Ry  
 12:20 Arr Hotel Ben Fr.  
 12:25 - Ry perm. to call Had AM 2/23/50 Ry  
 12:27 - Ry to show & have toilet brush &  
 pool for AM 2/23/50 Ry  
 12:30 - Skelton, Paris & M.B. Davis in Ry  
 12:31 - Miller & Brennan out Ry  
 12:35 - Granted permission to take shower Ry  
 12:52 - In bed reading Evening Bulletin Ry  
 1:00 AM M.B. Davis out Ry  
 2:00 M.B. Davis in, Wette out, Brennan & Miller in Ry  
 3:10 Wette in Ry  
 3:45 Paris out. Ry  
 4:45 Paris in Ry  
 4:45 Davis, M.B. out. Ry  
 5:45 Wette out, Davis in Ry  
 6:45 Wette in, Paris out Ry  
 7:30 M.B. Davis out Ry  
 7:50 M.B. Davis in Ry



Page 4

7 <sup>50</sup>	Awake	Wm
8 <sup>00</sup>	Awake-shave	Wm
8 <sup>25</sup>	Finished dressing, reading morning paper in living room	Wm
9 <sup>00</sup>	Given breakfast - orange juice, 2 soft-boiled eggs, salt & black coffee	Wm
9:35 am	Left Hotel with agent & proceeded to office	Wm
9:55 am	Arrived office	Wm
9:50 AM	En route to work	Wm
10:30 AM	Miller out	Wm
10:55 AM	Miller in	Wm
11:45 AM	Jensen in	Wm
11:50 AM	Jensen out	Wm
11:50 AM	Miller in	Wm
11:53 AM	Brennan out	Wm
12:04 PM	Brennan in	Wm
12:10 PM	Bald in - had lunch & coffee	Wm
	ham sandwich	Wm
2:10 PM	Mr. Cornelius in - for ball outside	Wm
2:11 PM	" " out	Wm
2:15 PM	Joseph Bald in	Wm
2:50 PM	Joseph Bald called Mr. Dougherty - not in	Wm
3:03 PM	Mr. Cornelius in	Wm
3:15 PM	Jensen in	Wm
3:16 PM	Miller out, Cornelius out	Wm
3:37 PM	Joe Heldt - Jensen out	Wm
3:42 PM	Jensen in	Wm
3:55 PM	Mr. Cornelius in	Wm
3:57 PM	Miller in	Wm
4:00 PM	Mr. Cornelius out	Wm
4:08 PM	Joseph Bald & Mr. Cornelius in	Wm
4:12 PM	Mr. Cornelius out	Wm
4:15 PM	Brennan & Jensen out	Wm
4:16 PM	Brennan in	Wm
4:22 PM	Joe Bald out	Wm

Page 5

4:25 pm Jervis in RB  
4:50 pm Miller out RB  
4:57 pm Miller in RB  
5:30 pm Brennan, Miller, Jervis & Gold out RB  
5:27 pm Brennan, Miller & Gold leave building RB  
5:50 pm Brennan, Miller & Gold in room 1458, RB  
Benjamin Franklin Hotel  
5:53 pm Leonard & Hancock in RB  
7:20 pm Dinner served RB  
7:48 pm Brennan, Miller, Gold, Leonard & Hancock RB  
leave Ben Franklin Hotel  
8:00 pm Miller, Brennan & Gold in office RB  
8:30 pm Miller, Brennan & Gold to Tollet RB  
8:40 pm Brennan, Miller & Gold ret. room 515 RB  
8:47 pm Jrs. Gold, Samuel Gold (father) in RB  
9:15 pm Miller out RB  
9:26 pm Jrs. Gold, Samuel Gold out RB  
10:28 pm Arrest made RB  
10:30 pm Brennan, Gold, Miller out - to U.S. RB  
Post Office Bldg. 10<sup>th</sup> & Chestnut Sts.  
10:40 pm In Judge McFanning's chambers RB  
11:05 pm Hearing over - Gold turned over to custody of  
U.S. Deputy Marshall John D. Leahy  
11:10 pm Gold, Miller, Brennan & Leahy driven RB  
by FBI car to Moyamensing Prison,  
10<sup>th</sup> & Reed Sts.  
11:25 pm Leahy turned Gold over to jailer RB

Richard E. Brennan  
5-23-50  
J. D. Miller, Jr.  
5-23-50

Date Received June 13, 1950

From Cincinnati  
(Name of Contributor)

(Address of Contributor)

By \_\_\_\_\_  
(Name of Special Agent)

Be Returned Yes ( )  
No ( )

Description: Two photostatic copies and 1 Subject's signature card  
and ledger card 1 Subject's checking account at  
Provident Savings Bank & Trust Co., Cincinnati.

File No. 65-4307-1-B-6 (20)

**AUTHORIZED SIGNATURES**  
FOR THE PROVIDENT SAVINGS BANK & TRUST CO. CHICAGO, ILL.

It is understood and agreed between the undersigned and The Provident Savings Bank & Trust Company, that all moneys now or hereafter on deposit on this account in said bank and the interest thereon are the property of the undersigned, and payable to either, or to the survivor of them.

It is further understood and agreed that all deposits are received subject to the terms and provisions printed in depositor's pass book, and any modifications thereof.

SIGNATURE Harry Gold

SIGNATURE \_\_\_\_\_

BUSINESS 14 Jackson St RESIDENT ADDRESS \_\_\_\_\_  
HOME ADDRESS Chicago, Ill. HOME TELEPHONE \_\_\_\_\_

INTRODUCED BY Lavie Horvitz ADDRESS \_\_\_\_\_

OTHER REFERENCES L. Rabin ADDRESS \_\_\_\_\_

DATE OPENED **SEP 24 1938** DATE TERMINATED 6-5-40 BY Lawrence

NAME Gold, Harry TELEPHONE \_\_\_\_\_ IMPORTANT! SEE OTHER SIDE

**AUTHORIZED SIGNATURES**  
FOR THE PROVIDENT SAVINGS BANK & TRUST CO. CHICAGO, ILL.

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SIGNATURE Harry Gold

SIGNATURE \_\_\_\_\_

BUSINESS 14 Jackson St RESIDENT ADDRESS \_\_\_\_\_  
HOME ADDRESS Chicago, Ill. HOME TELEPHONE \_\_\_\_\_

INTRODUCED BY Lavie Horvitz ADDRESS \_\_\_\_\_

OTHER REFERENCES L. Rabin ADDRESS \_\_\_\_\_

DATE OPENED **SEP 24 1938** DATE TERMINATED 6-5-40 BY Lawrence

NAME Gold, Harry TELEPHONE \_\_\_\_\_ IMPORTANT! SEE OTHER SIDE

65-4307-1-B-6(20)

SHEET NO

NAME

HARRY GOLD

PHONE NO

ADDRESS

CINTI. OHIO  
49 GLENDALE ST.

LD BALANCE	CHECKS IN DETAIL	DATE	DEPOSITS	DATE	NEW BALANCE
27600	BALANCE BROUGHT FORWARD	SEP 24 '34	27000	SEP 24 '34	27600
34700	5000 -	OCT 15 '34	7700	OCT 15 '34	34700
29700	7628 -	OCT 22 '34		OCT 22 '34	29900
21672	1250 -	OCT 25 '34		OCT 25 '34	21878
20622	3500 -	NOV 7 '34		NOV 7 '34	20628
17122	4000 -	NOV 9 '34		NOV 9 '34	17128
13122	3500 -	NOV 12 '34		NOV 12 '34	13128
1622	2000 -	NOV 16 '34		NOV 16 '34	1628
7622	3500 -			NOV 19 '34	7622
4122	15 -			DEC 3 '34	4122
4107	4000 -			DEC 15 '34	4107
107				DEC 21 '34	107
15107	300 -	JAN 7 '35	15000	JAN 7 '35	15107
14807	6000 -			JAN 12 '35	14807
20300	2000 -	JAN 14 '35	21583	JAN 14 '35	20390
18300	1000 -			JAN 17 '35	18390
18290	2000 -	JAN 17 '35		JAN 17 '35	18290
16290	3500 -			JAN 24 '35	16290
12790	3000 -			JAN 27 '35	12790
9790	250 -			JAN 28 '35	9790
3290	823 -			FEB 1 '35	3290
2465	200 -			FEB 2 '35	4465
2265	800 -			FEB 4 '35	4265
1465	300 -			FEB 4 '35	465
1165	1500 -			FEB 8 '35	4465
265	2500 -			FEB 11 '35	4165
140	2500 -			FEB 11 '35	265
119	21 -			FEB 13 '35	165
4119	4000 -			FEB 15 '35	6140
4119	1000 -			FEB 16 '35	6119
3119	2000 -			FEB 18 '35	4119
1119	1000 -			FEB 28 '35	3119
119	3200 -			MAR 1 '35	1119
119	1000 -			MAR 1 '35	119
119	3200 -			MAR 10 '35	12000
119	1000 -			MAR 10 '35	12000
119	3200 -			MAR 16 '35	8519
119	1000 -			MAR 18 '35	6019
119	2500 -			MAR 20 '35	3519
119	2500 -			MAR 21 '35	1019
119	2000 -			MAR 21 '35	4960
119	4000 -			MAR 23 '35	960
119	800 -			MAR 23 '35	160
119	100 -			MAR 23 '35	60
119	3250 -			MAR 22 '35	15000
119	3500 -			MAR 26 '35	9210
119	4000 -			MAR 27 '35	6310
119	2000 -			MAR 27 '35	2310
119	100 -			MAR 27 '35	310
119	2500 -			MAR 25 '35	250
119	2500 -			MAR 25 '35	3210
119	1500 -			MAR 25 '35	19750
119	2500 -			MAR 25 '35	2710
119	1500 -			MAR 25 '35	110

THE PROVIDENT SAVINGS BANK & TRUST CO.  
CINCINNATI, OHIO



C

9

NAME		HARRY GOLD	
ADDRESS		49 GENDALL ST.	
CHECKS IN DETAIL		DEPOSITS	
DATE		DATE	
BALANCE BROUGHT FORWARD \$10.00			
JAN 15 1935		JAN 15 1935	
JAN 20 1935		JAN 20 1935	
700.00		700.00	
		JAN 25 1935	
		JAN 30 1935	
		FEB 5 1935	
		FEB 10 1935	
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		MAR 5 1935	
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		DEC 5 1935	
		DEC 10 1935	
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		DEC 25 1935	
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		JAN 10 1936	
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		NOV 20 1940	
		NOV 25 1940	

**WONE ME**

~~INT. CLUB~~  
49 GLENDALE ST.

## Leaving Town

**THE PROVIDENT SAVINGS BANK & TRUST CO**  
CINCINNATI, OHIO

HEET NO

NAME

HARRY GOLD

ADDRESS

6271 - 6272

49 GLENDALE ST.

PHONE NO

LD BALANCE

CHECKS IN DETAIL

DATE

DEPOSITS

DATE

NEW BALANCE

270.00

BALANCE BROUGHT FORWARD BY

SEP 24 1934

270.00

SEP 24 1934

270.00

347.00

50.00 -

01

SEP 22 1934

SEP 22 1934

297.00

297.00

78.28 -

01

SEP 25 1934

SEP 25 1934

218.72

218.72

125.00 -

01

SEP 27 1934

SEP 27 1934

206.22

206.22

35.00 -

01

SEP 29 1934

SEP 29 1934

171.22

171.22

40.00 -

01

SEP 12 1934

SEP 12 1934

131.22

131.22

35.00 -

01

SEP 16 1934

SEP 16 1934

96.22

96.22

20.00 -

01

NOV 19 1934

NOV 19 1934

76.22

76.22

35.00 -

01

DEC 5 1934

DEC 5 1934

41.22

41.22

15.00 -

01

DEC 15 1934

DEC 15 1934

41.07

41.07

40.00 -

01

DEC 21 1934

DEC 21 1934

1.07

1.07

3.00 -

01

JAN 7 1935

JAN 7 1935

151.07

151.07

60.00 -

01

JAN 14 1935

JAN 14 1935

148.07

148.07

20.00 -

01

JAN 17 1935

JAN 17 1935

203.90

203.90

10.00 -

01

JAN 17 1935

JAN 17 1935

183.90

183.90

20.00 -

01

JAN 24 1935

JAN 24 1935

163.90

163.90

35.00 -

01

JAN 27 1935

JAN 27 1935

127.90

127.90

30.00 -

01

JAN 28 1935

JAN 28 1935

97.90

97.90

25.00 -

02

FEB 1 1935

FEB 1 1935

92.90

92.90

82.50 -

01

FEB 2 1935

FEB 2 1935

445.5

445.5

20.00 -

01

FEB 4 1935

FEB 4 1935

425.5

425.5

380.00 -

01

FEB 4 1935

FEB 4 1935

45.5

45.5

30.00 -

01

FEB 8 1935

FEB 8 1935

445.5

445.5

150.00 -

01

FEB 11 1935

FEB 11 1935

415.5

415.5

250.00 -

01

FEB 11 1935

FEB 11 1935

265.5

265.5

250.00 -

01

FEB 15 1935

FEB 15 1935

165.5

165.5

21.00 -

01

FEB 15 1935

FEB 15 1935

81.40

81.40

40.00 -

01

FEB 16 1935

FEB 16 1935

81.40

81.40

20.00 -

01

FEB 18 1935

FEB 18 1935

41.40

41.40

20.00 -

01

FEB 28 1935

FEB 28 1935

31.40

31.40

20.00 -

01

MAR 1 1935

MAR 1 1935

11.40

11.40

1.00 -

01

MAR 2 1935

MAR 2 1935

11.40

11.40

3.00 -

01

MAR 10 1935

MAR 10 1935

12.40

12.40

25.00 -

01

MAR 16 1935

MAR 16 1935

87.40

87.40

25.00 -

01

MAR 18 1935

MAR 18 1935

62.40

62.40

20.00 -

01

MAR 28 1935

MAR 28 1935

42.40

42.40

20.00 -

01

MAR 30 1935

MAR 30 1935

49.60

49.60

40.00 -

01

MAR 10 1935

MAR 10 1935

9.60

9.60

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01

MAR 17 1935

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Date Received June 14, 1950

from New York  
(Name of Contributor)

(Address of Contributor)

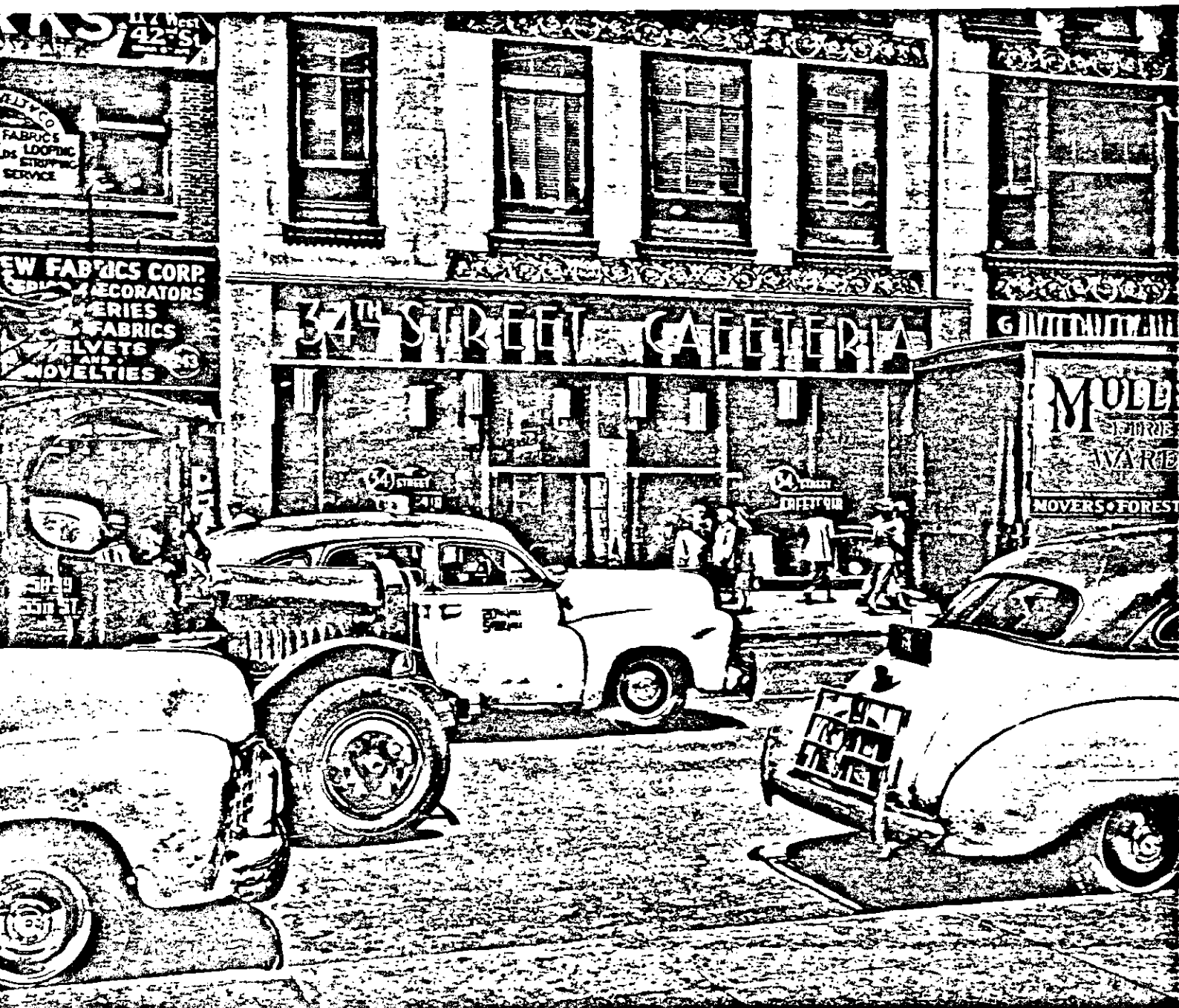
By Name of Special Agent

Has Returned Yes ( )  
No ( )

Description: 412 photos of places in N.Y. city  
where LBJ had meetings with  
File No. 65-4307-1B-6 (a) Tucker and for Sam & John

65-4307-1-B-6  
(21)

(all serials 1310)



"34th Street Cafeteria" on north side of 34th opposite Greyhound Bus terminal taken from in front of terminal. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.

65-4307-HB-6(21)





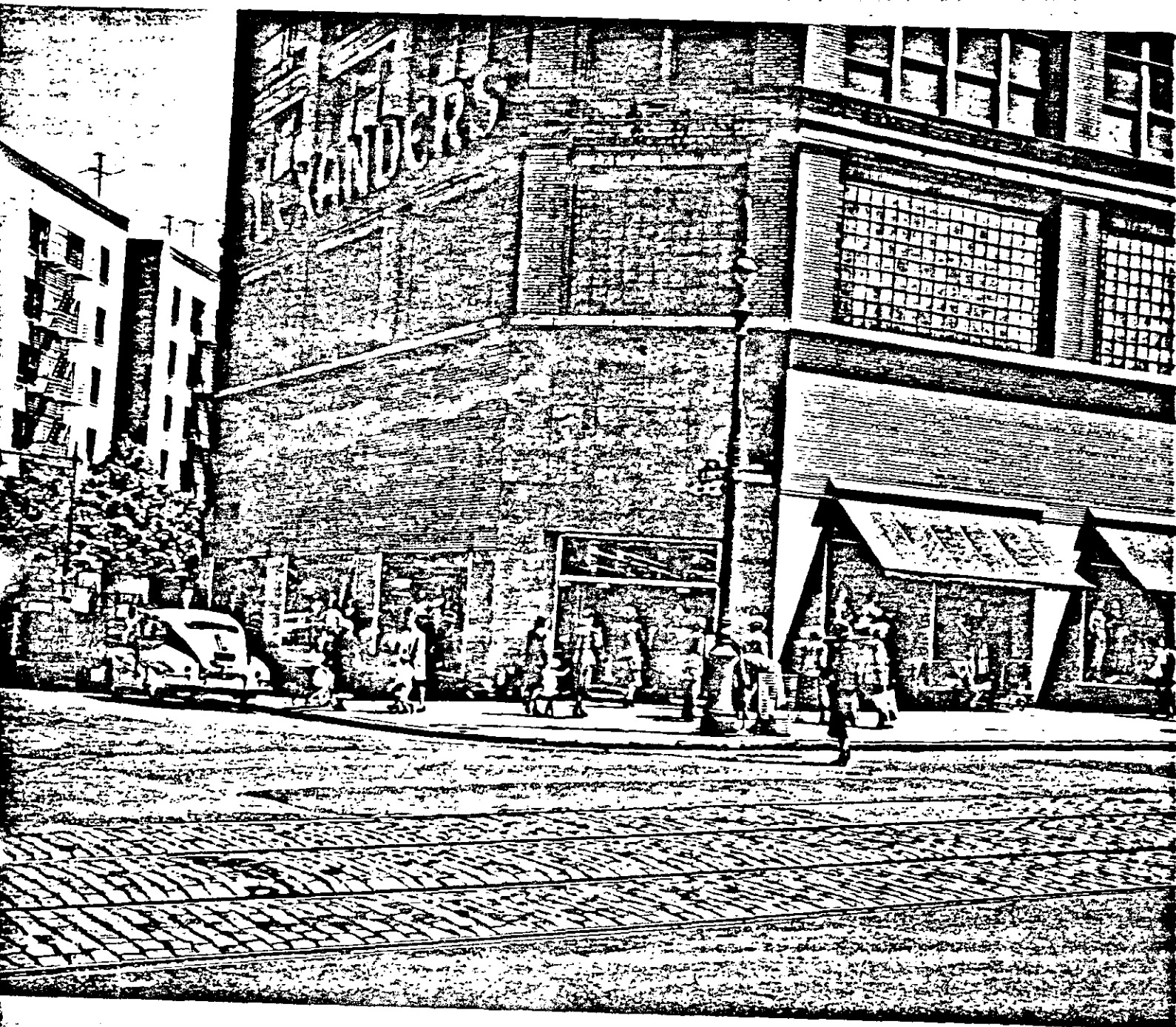
Child's Restaurant at 261 West 34th from South side of 34th. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



Child's Restaurant at 261 West 34th from SW angle. Pictures taken by  
Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2,  
1950.

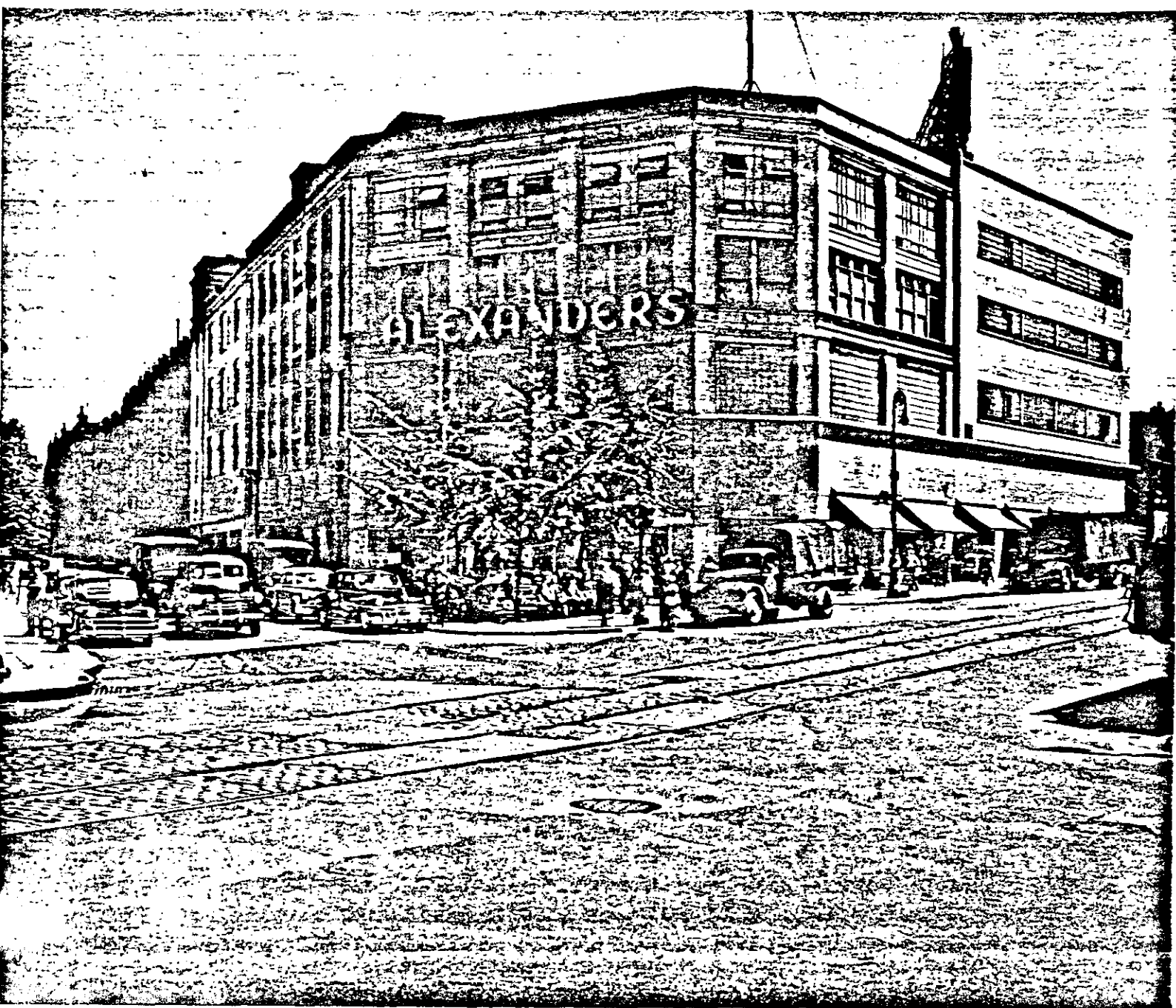


Child's Restaurant at 261 West 34th from SE angle. Pictures taken by  
Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2,  
1950.



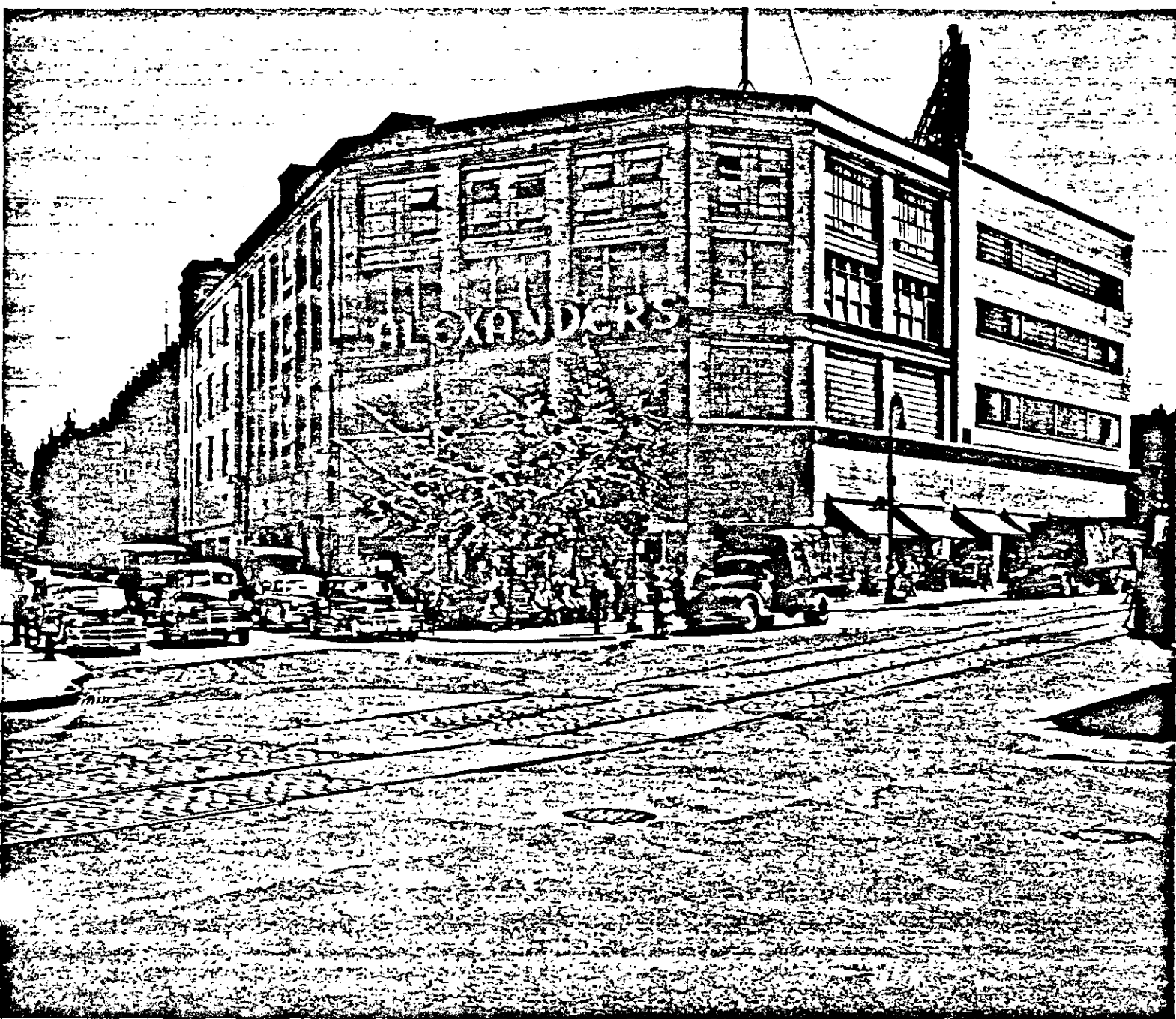
North Side Fordham Road at East 190th Street, facing door in Alexander's Store, which used to be Rosenbain's Restaurant. Pictures taken by Photographer Frank Schwartz accompanied by SA M. J. McDonagh on June 2, 1950.



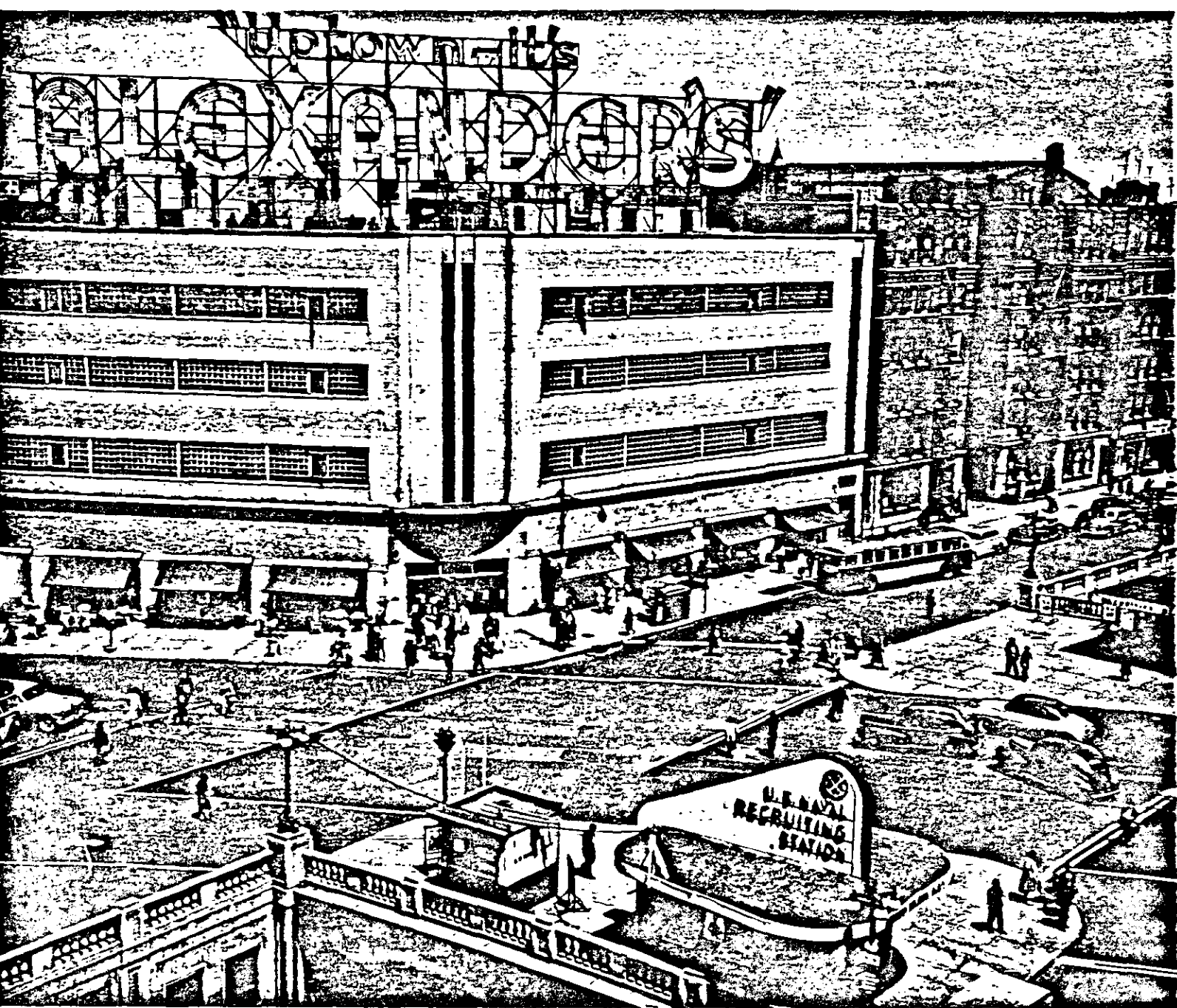


S.W. Corner of Creston Avenue and Fordham Road, looking diagonally across Fordham Road to Rosenhain's former location (taken at street level). Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.

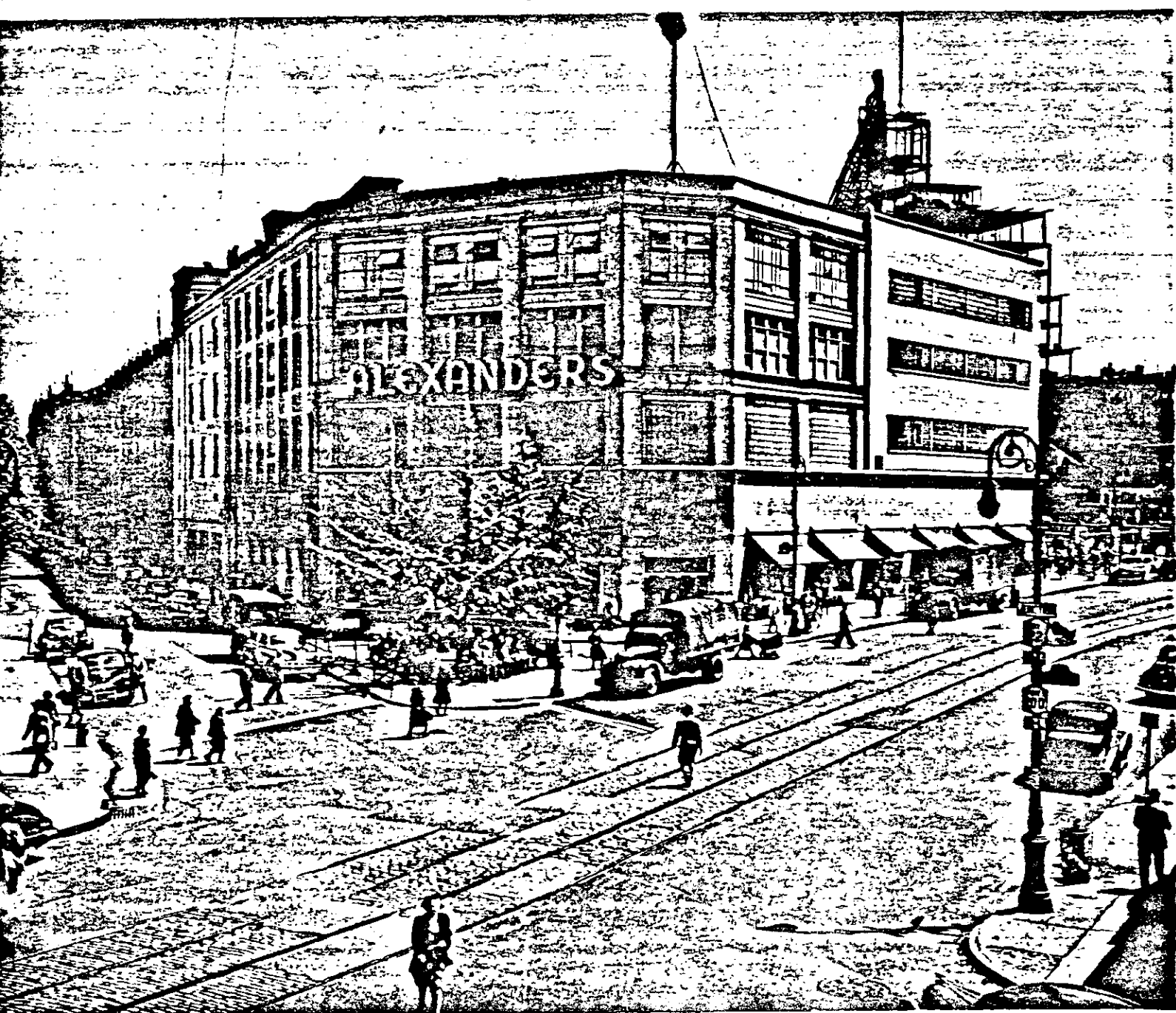




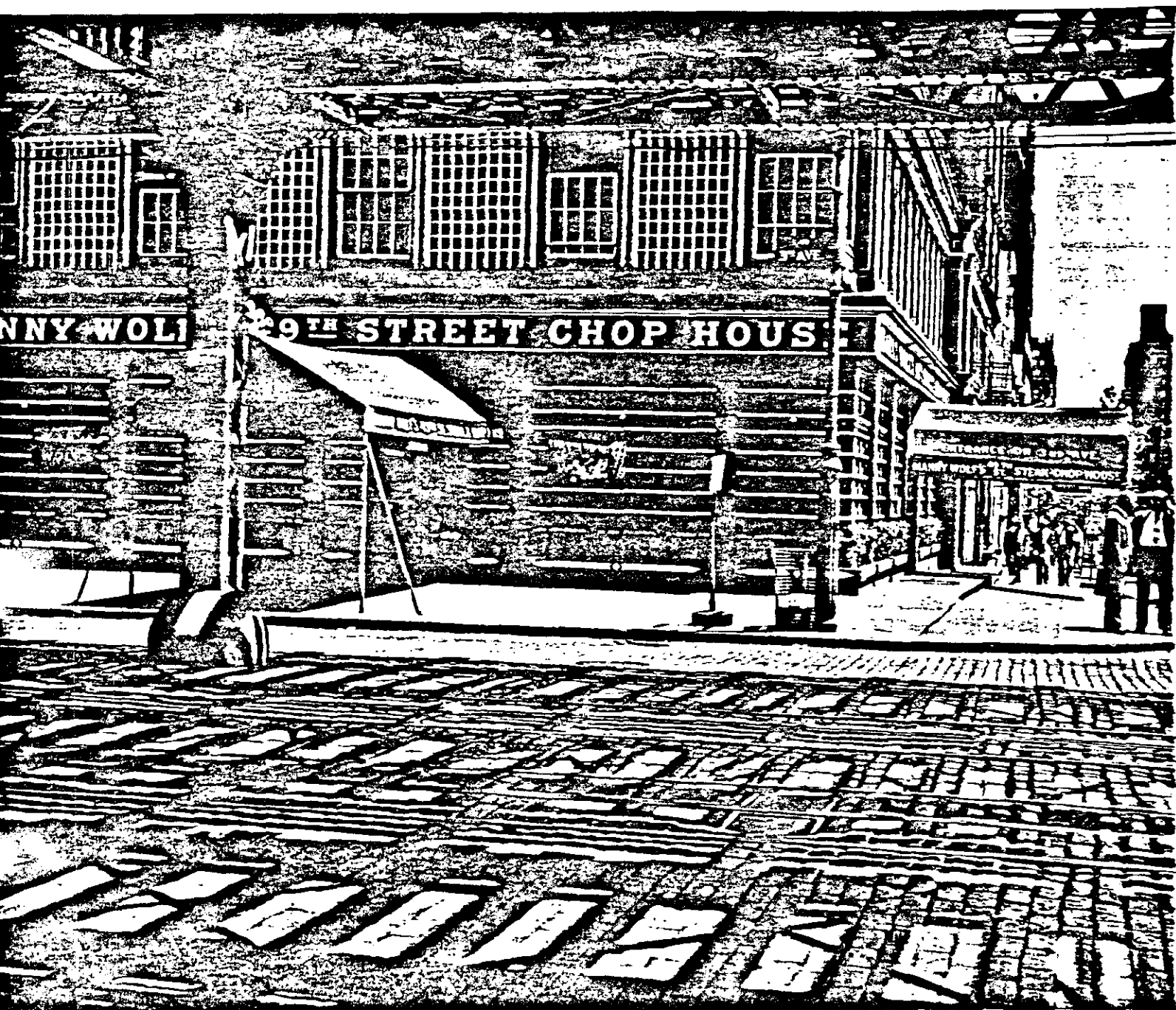
S.W. Corner of Creston Avenue and Fordham Road, looking diagonally across Fordham Road to Rosenhain's former location (taken at street level). Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



Grand Concourse and Fordham Road intersection looking north on the Concourse, taken from roof of the Wagner Building at 2488 Grand Concourse. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.

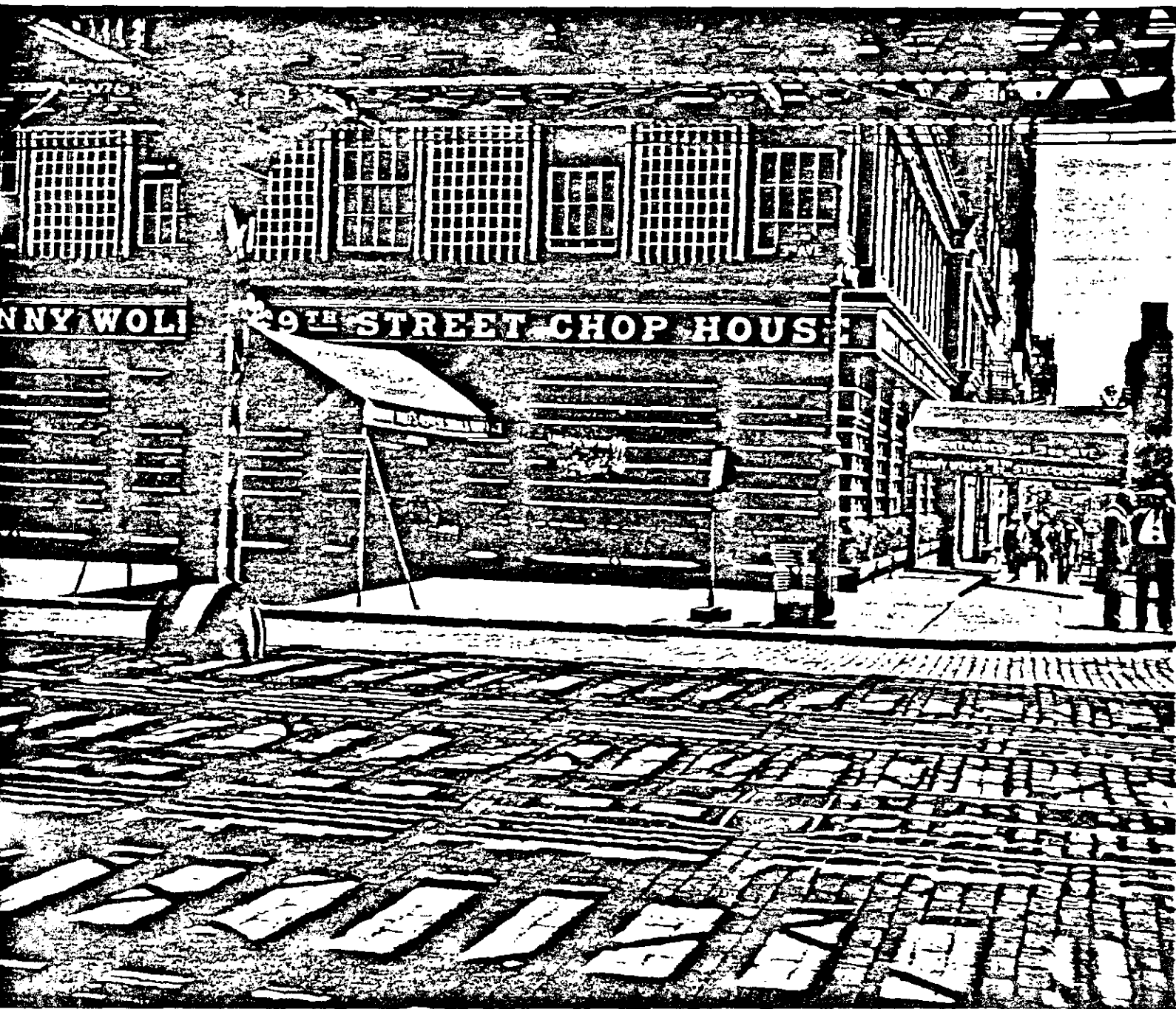


View SE corner of Creston Avenue and Fordham Road, looking diagonally across Fordham Road to Rosenbain's former location (taken from second floor in office of Dr. A. H. Saks, Dentist). Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



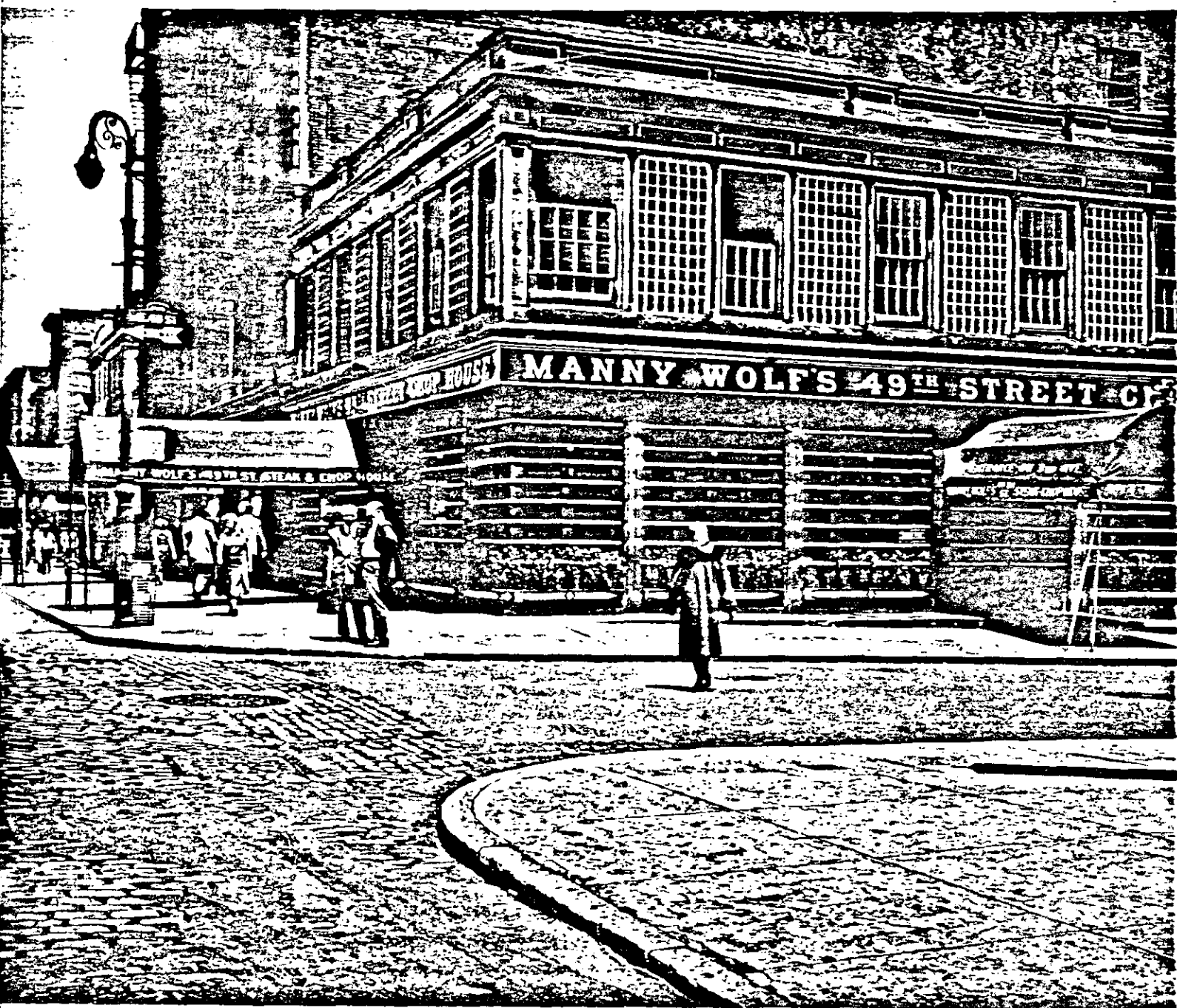
Hanny Wolf's from west side of 3rd Avenue. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



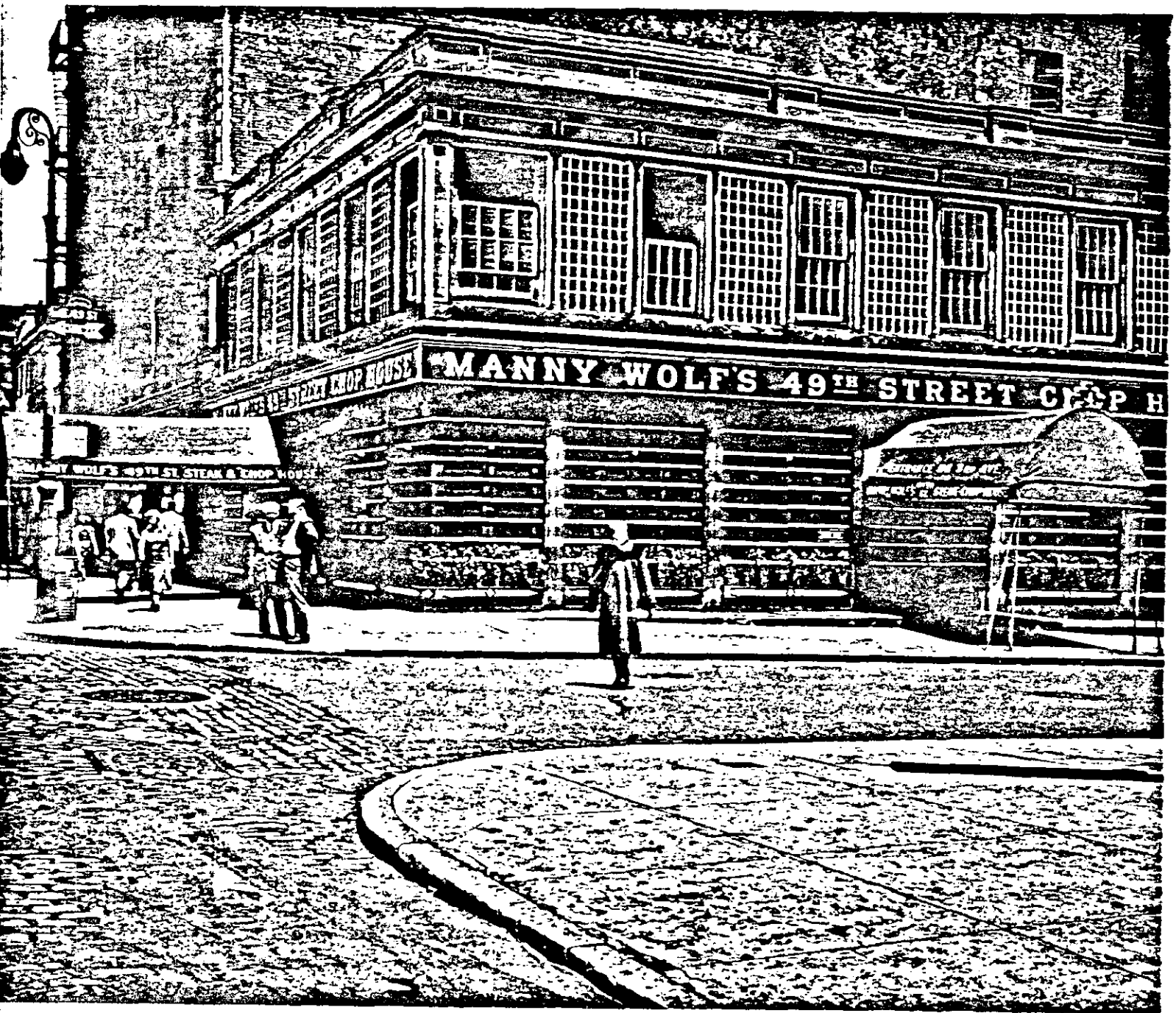


Hanny Wolf's from west side of 3rd Avenue. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.

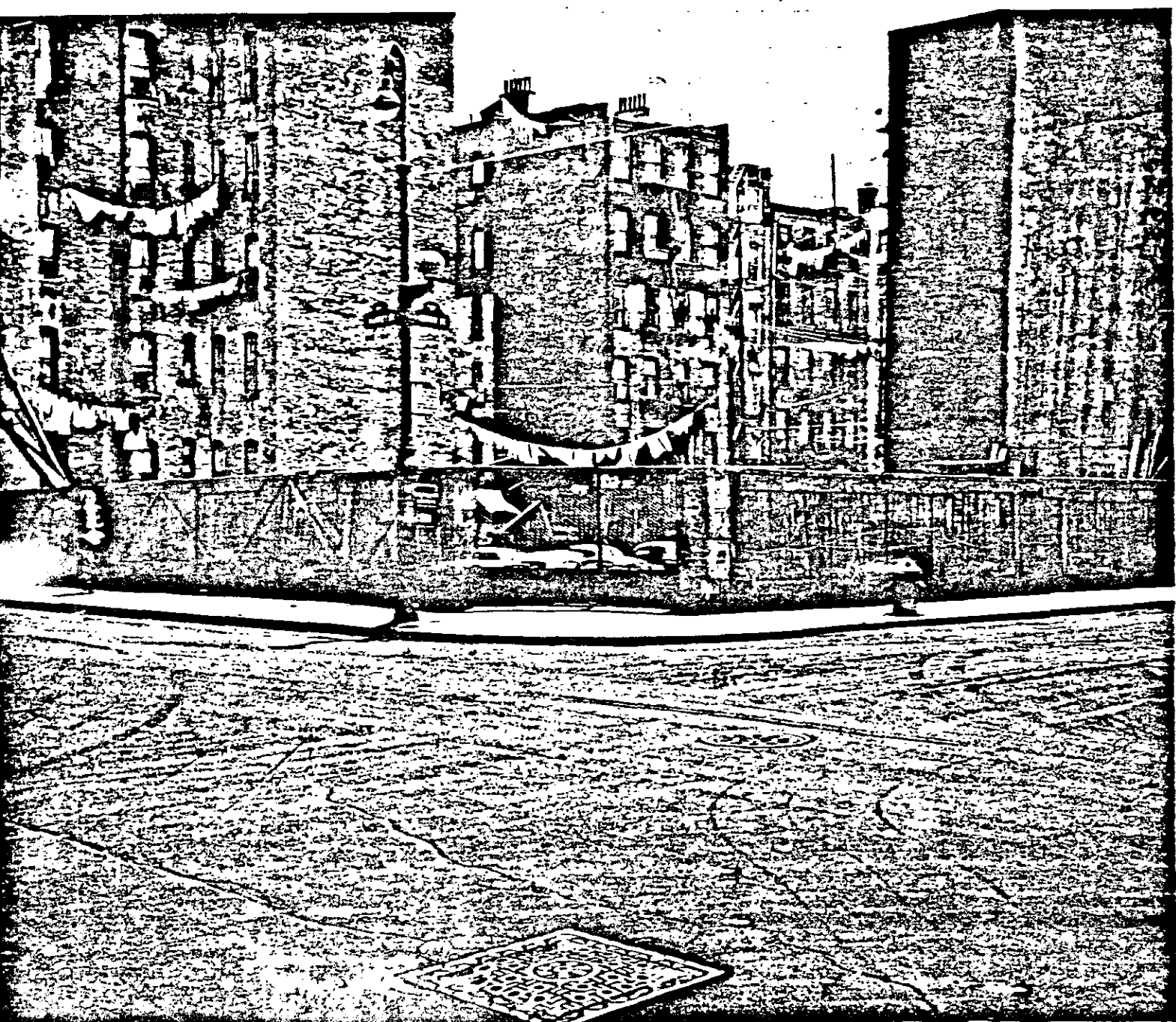




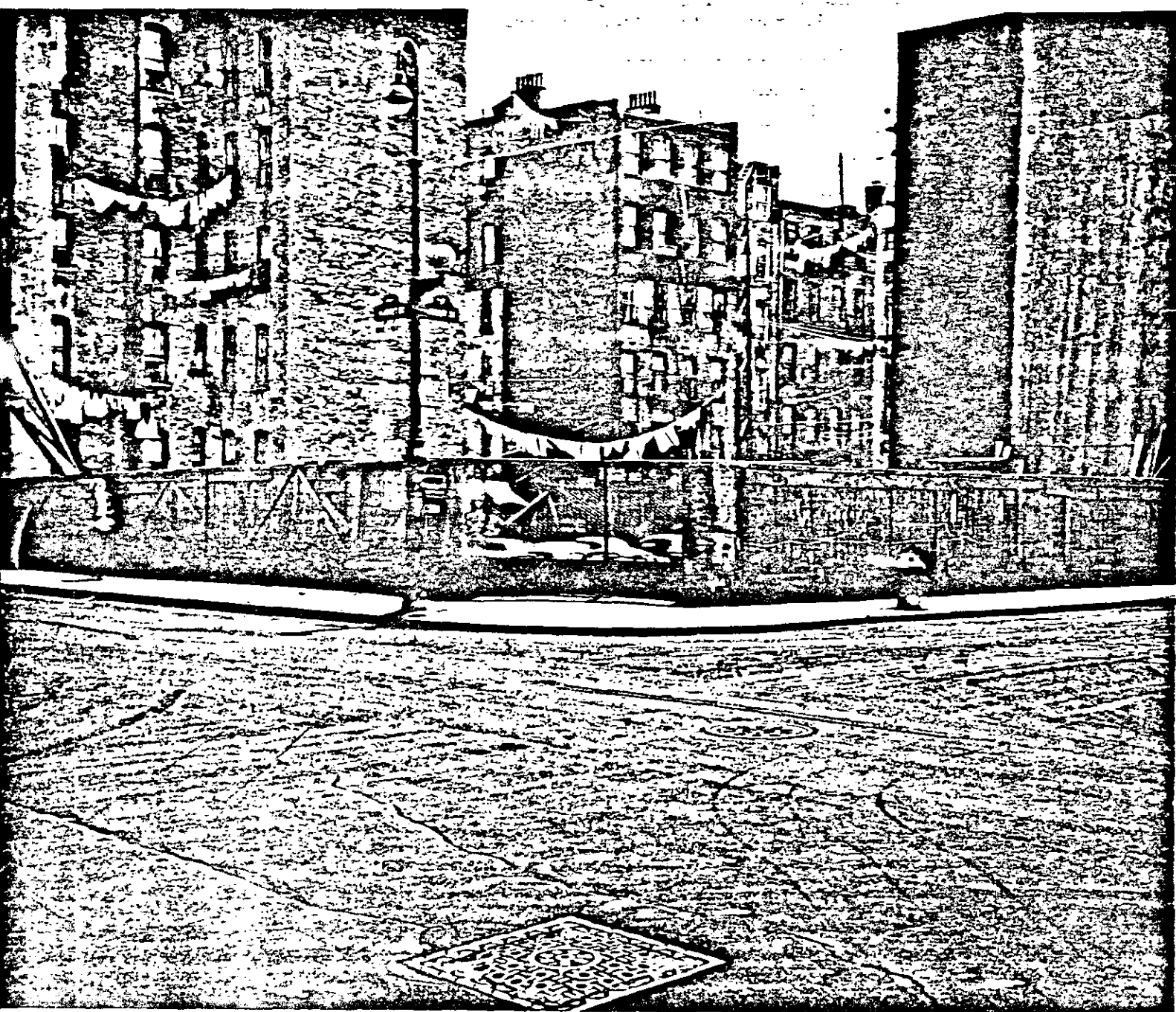
Looking at Manny Wolf's from S.W. direction. Pictures taken by Photographer Frank Schreitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



Looking at Manny Wolf's from S.W. direction. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



Intersection of Market and Henry Streets from the SE. Pictures taken by  
Photographer Frank Schwaitsar, accompanied by SA M. J. McDonagh, on June 2,  
1950.



Intersection of Market and Henry Streets from the SE. Pictures taken by  
Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2,  
1950.





Child's Restaurant at 261 West 34th from SE angle. Pictures taken by  
Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2,  
1950.

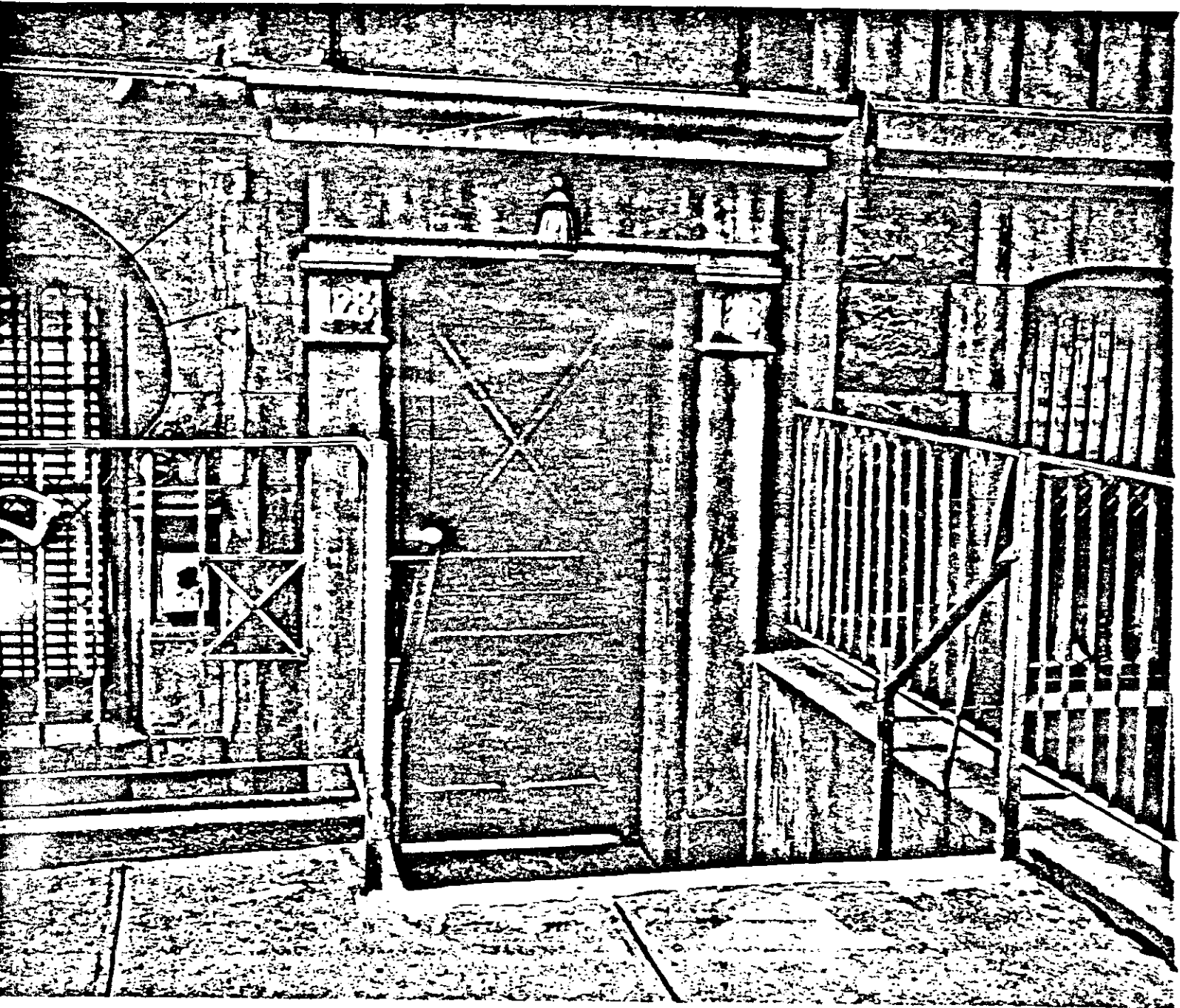




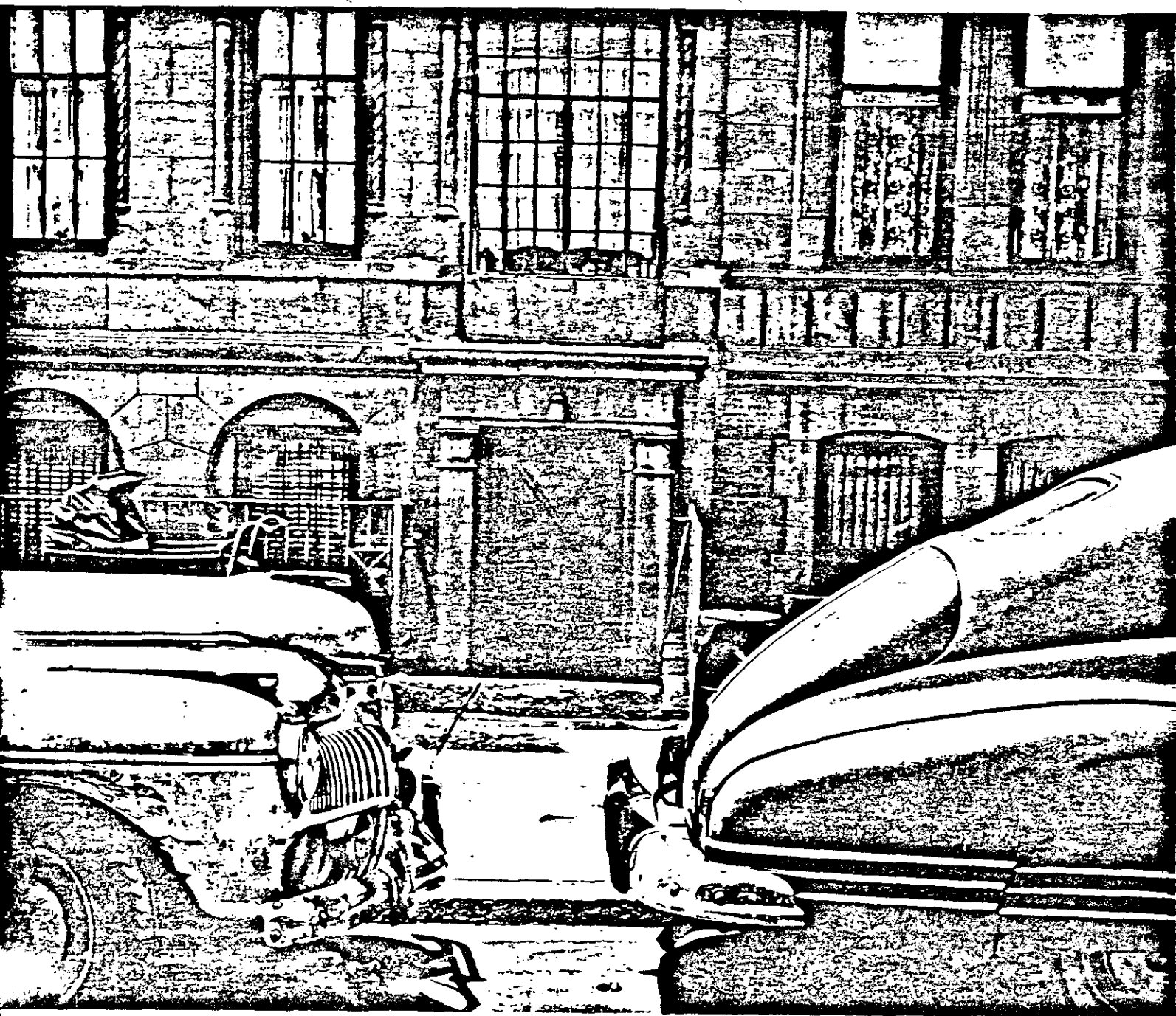
Child's Restaurant at 261 West 34th from SE angle. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



Closeup of doorway at 128 West 77th Street, New York City. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.

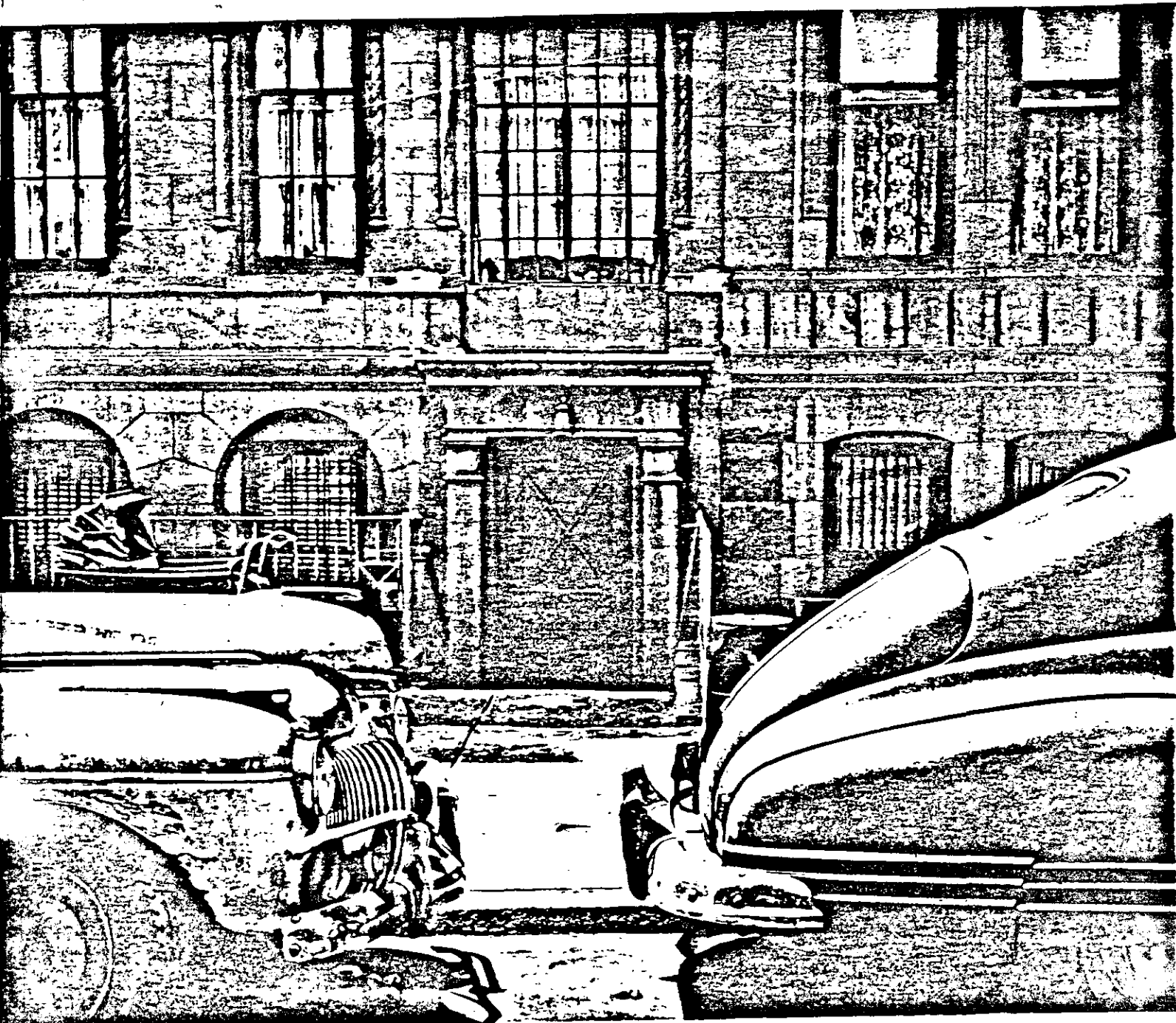


Closeup of doorway at 128 West 77th Street, New York City. Pictures taken by Photographer Frank Solweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



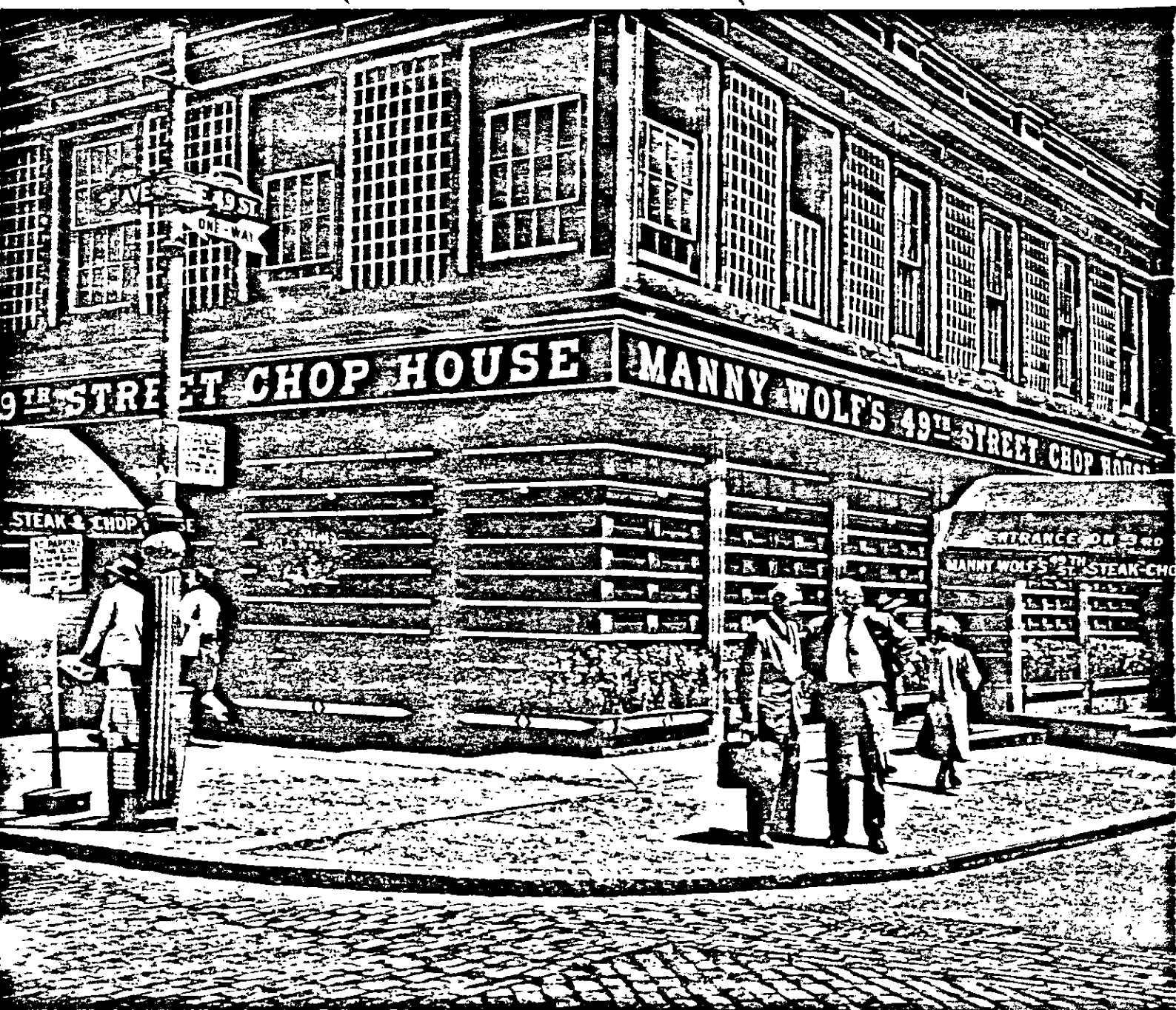
Looking into 126 West 77th Street from north side of 77th Street, New York City. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



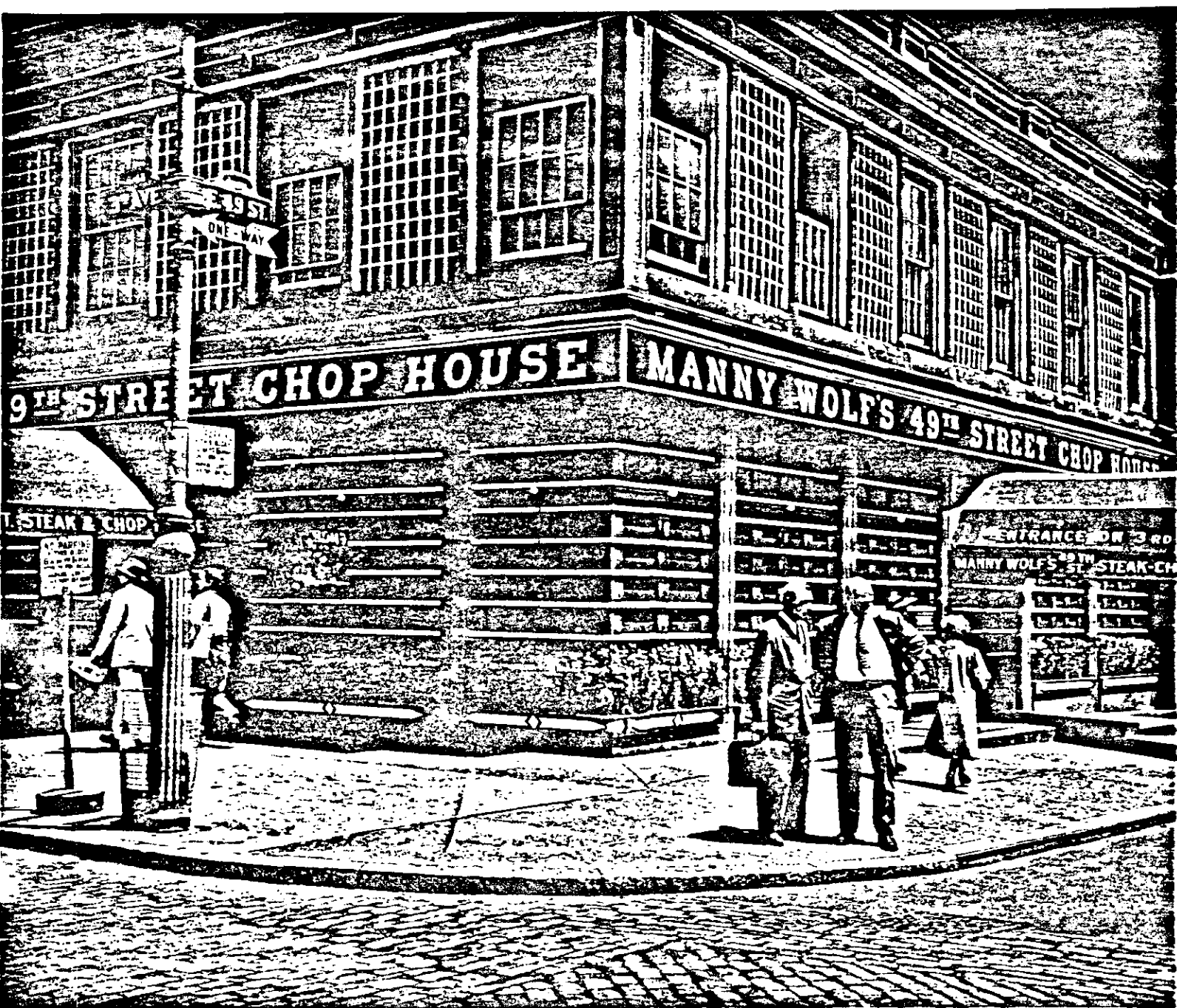


Looking into 128 West 77th Street from north side of 77th Street, New York City. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.

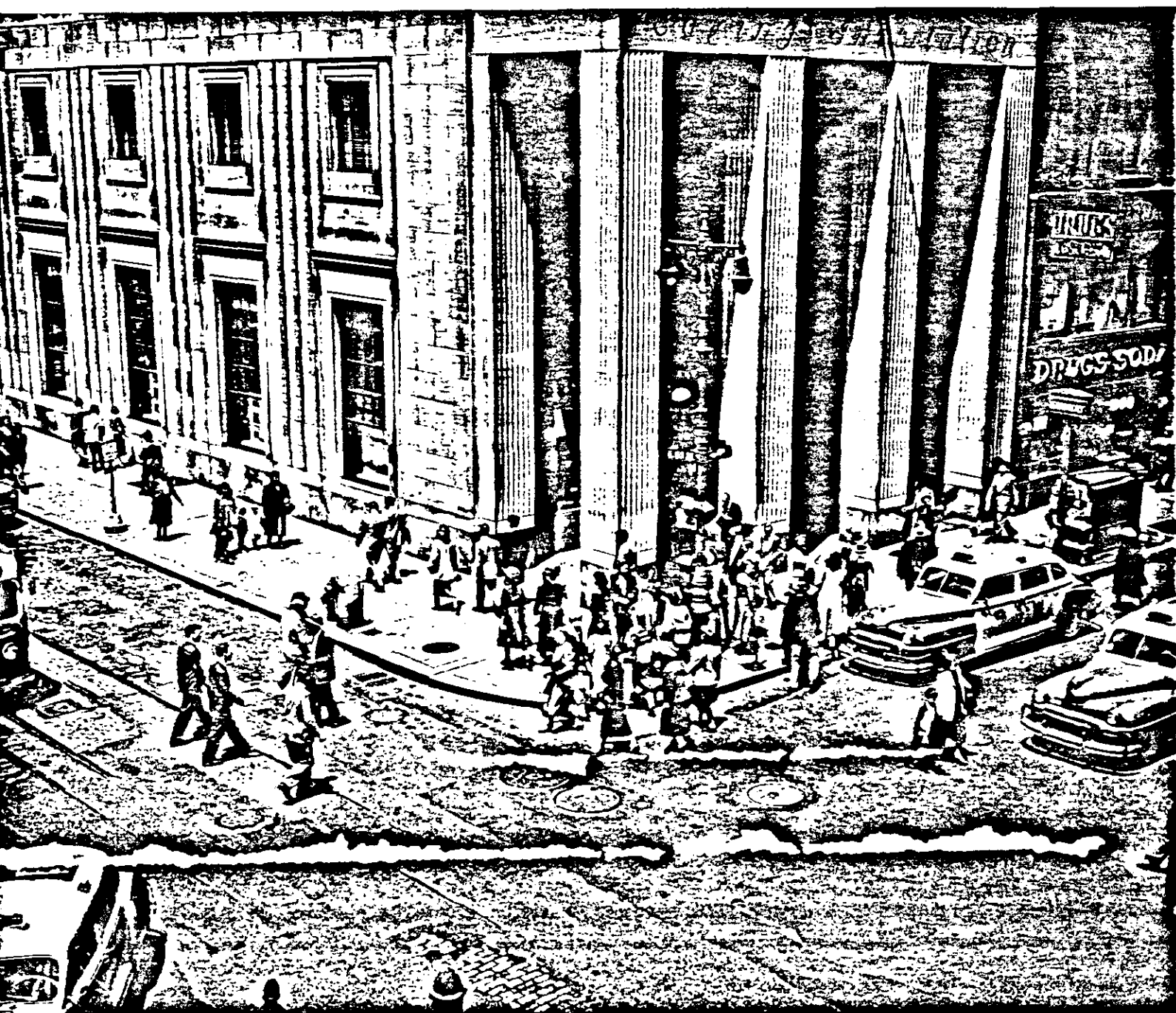




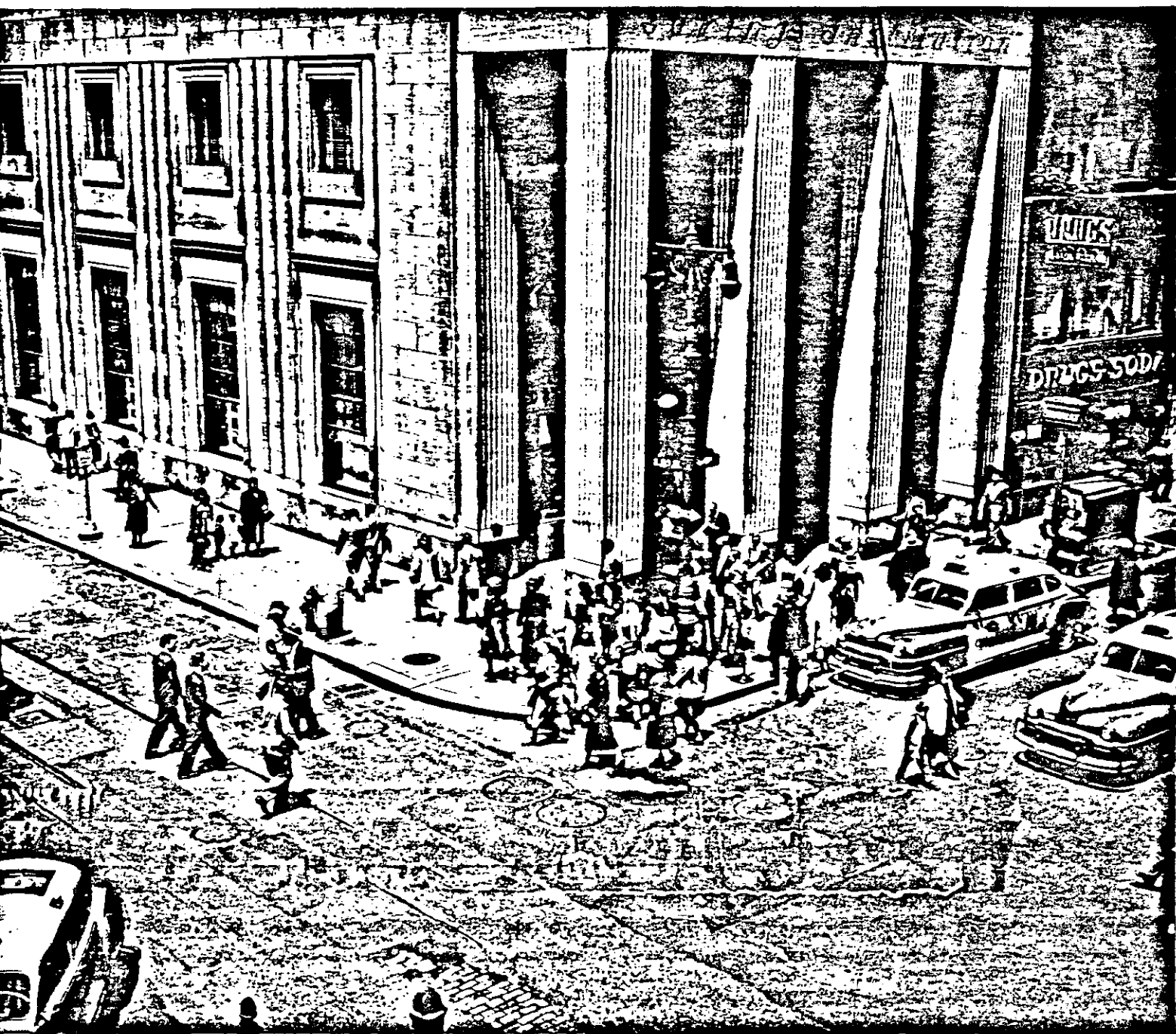
Looking at Manny Wolf's from S.W. direction, approximately 50 ft. distance.  
Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J.  
McDonagh, on June 2, 1950.



Looking at Manny Wolf's from S.W. direction, approximately 50 ft. distance.  
Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J.  
McDonagh, on June 2, 1950.

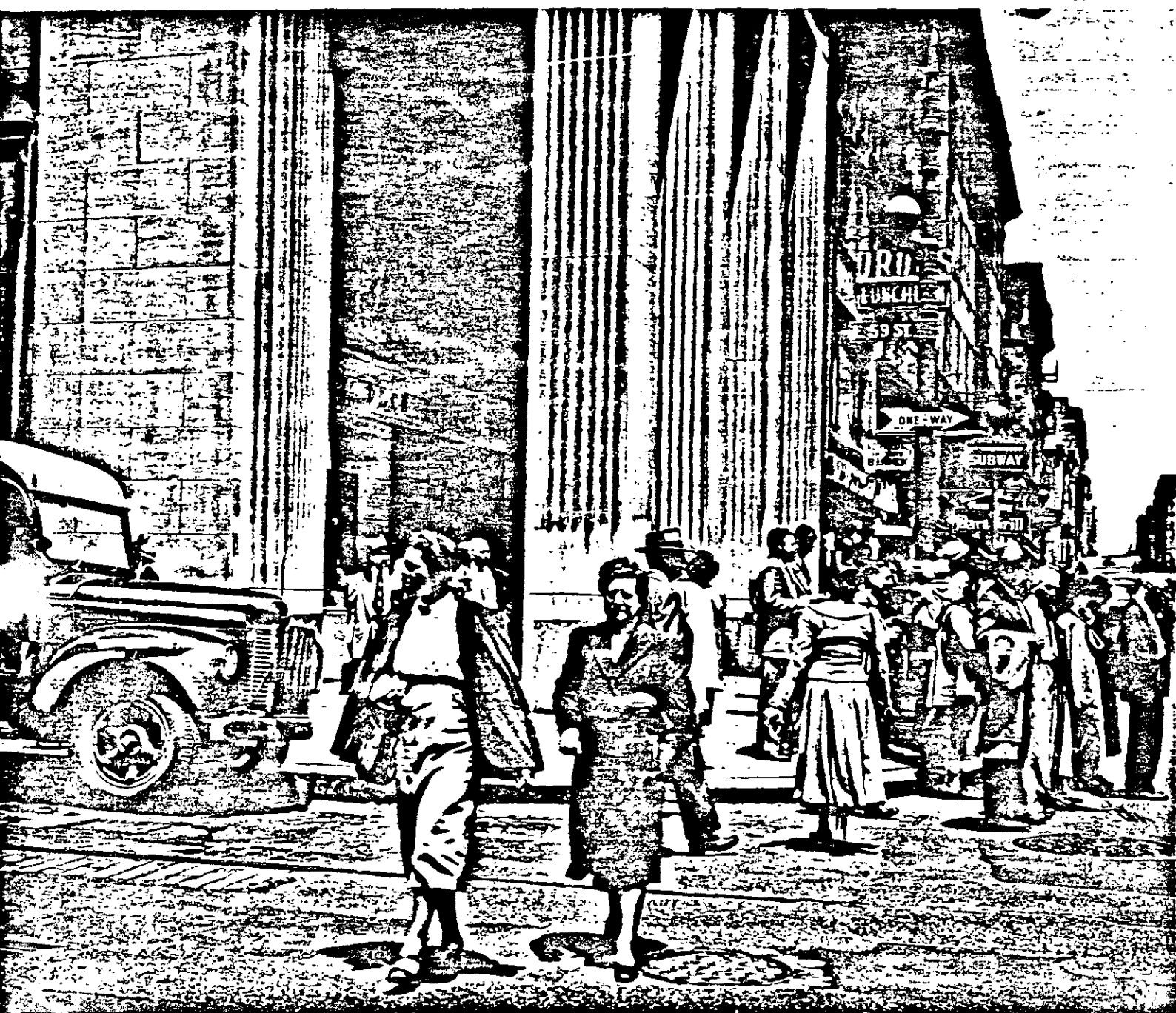


Looking N.W. from S.E. corner of East 59th and Lexington Avenue, taken from second floor (Don Martini's Dancing School). Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



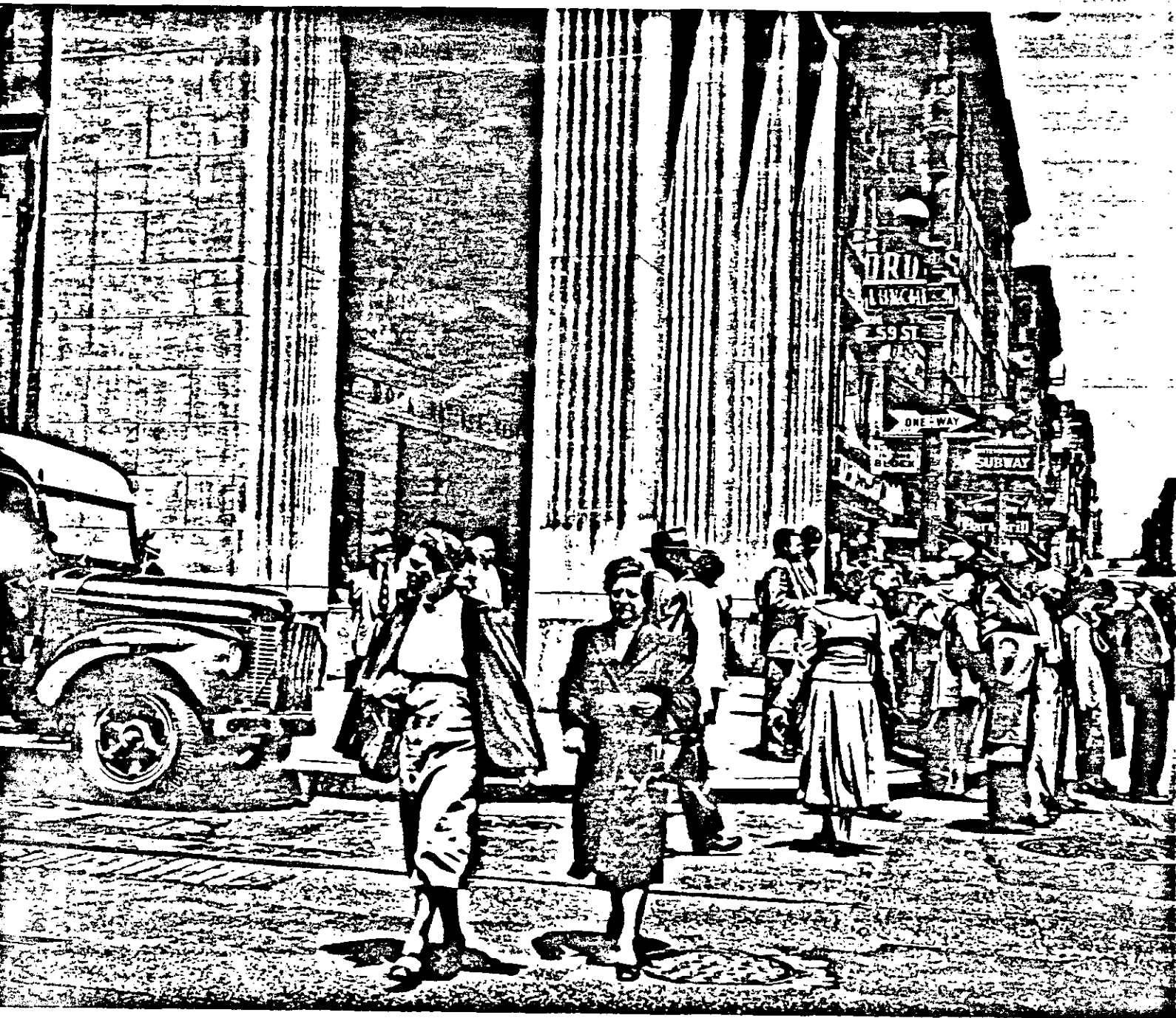
Looking N.W. from S.E. corner of East 59th and Lexington Avenues, taken from second floor (Don Martini's Dancing School). Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



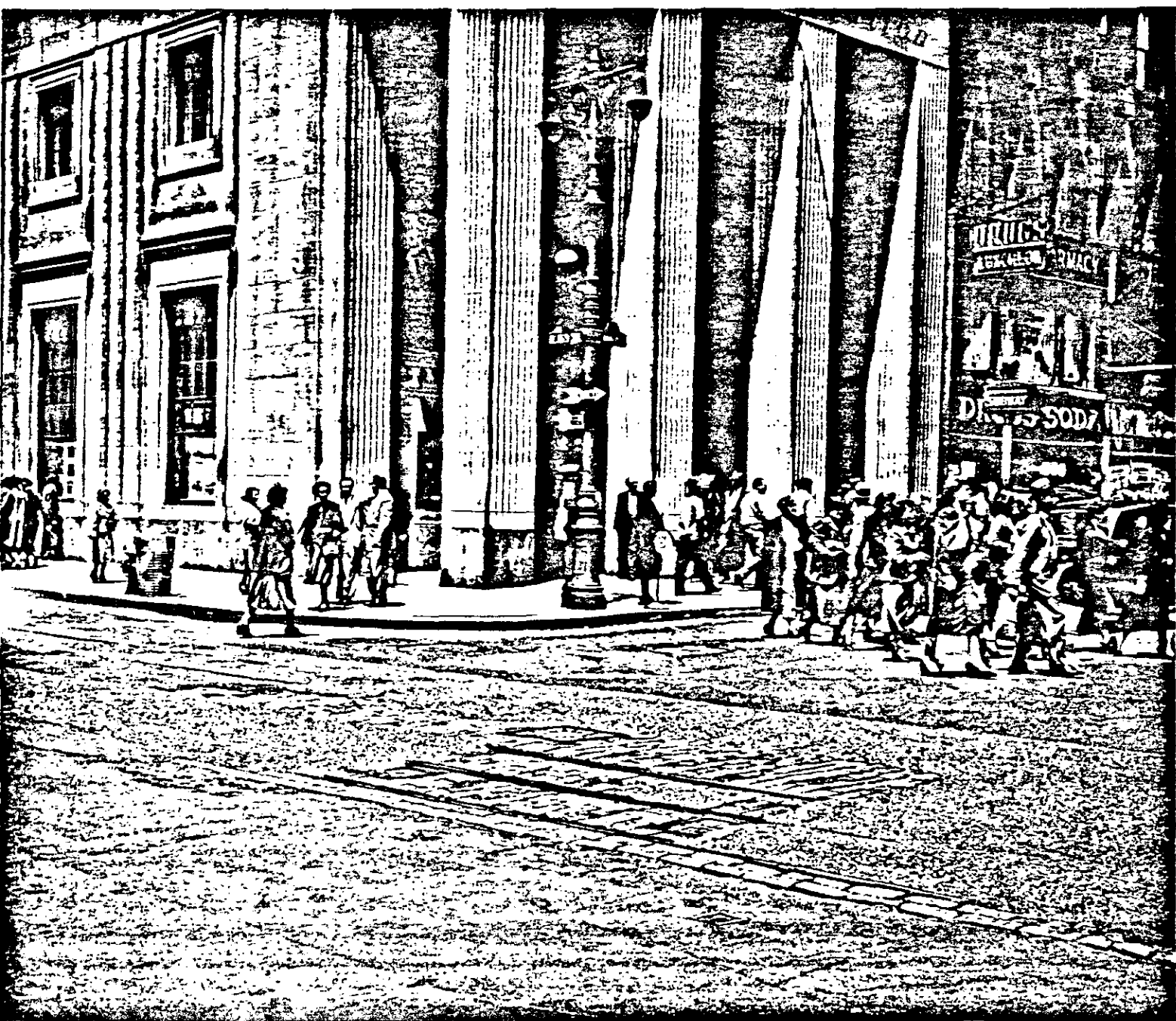


Looking north from S.W. Corner of East 59th and Lexington Avenue at street level. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.





Looking north from S.W. Corner of East 59th and Lexington Avenue at street level. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



Looking N.W. from S.E. corner of East 59th and Lexington Avenue at street level. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.

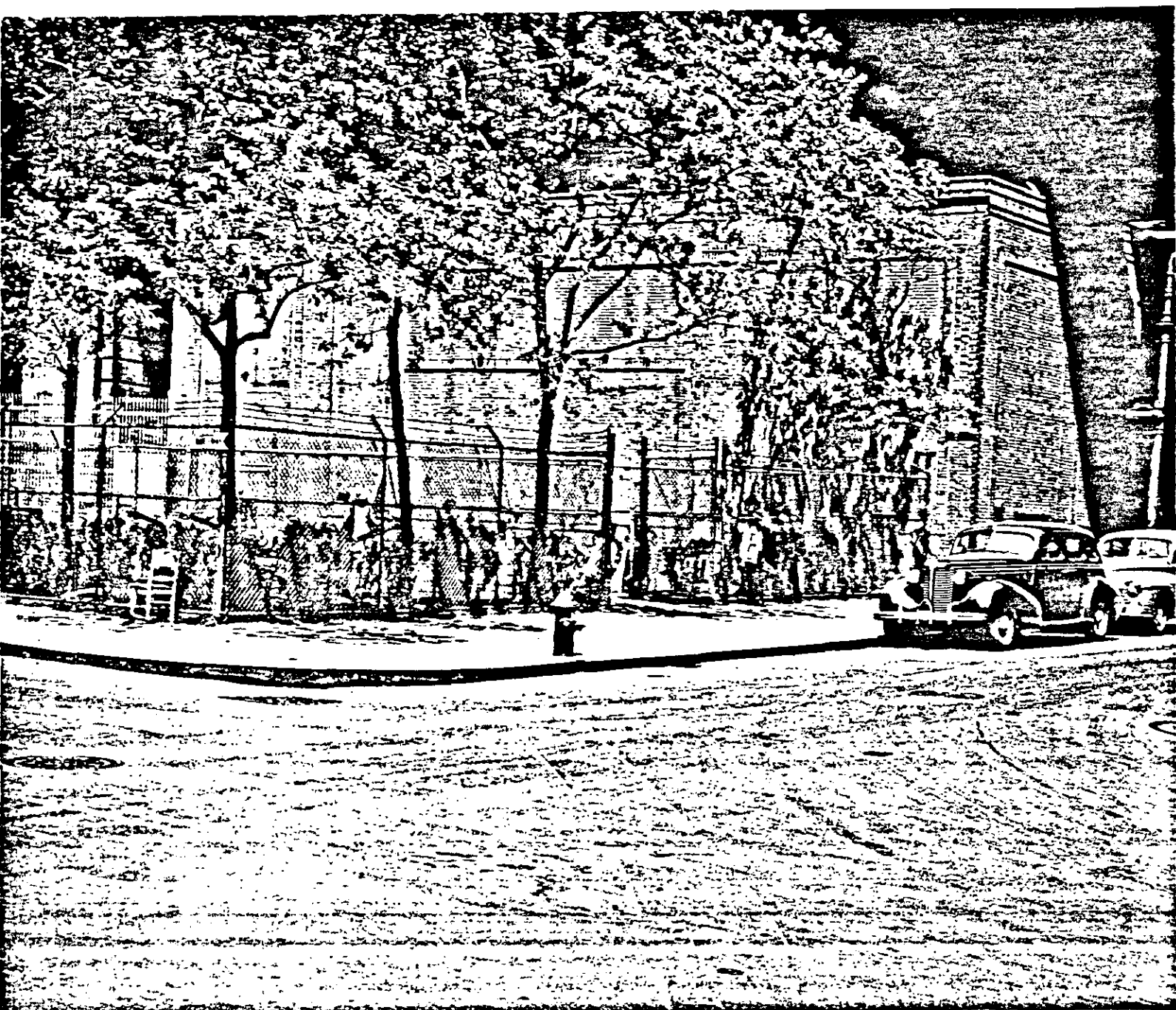


Looking N.W. from S.E. corner of East 59th and Lexington Avenue at street level. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.



Intersection of Market and Henry Streets from the NW. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.





Intersection of Market and Henry Streets from the NW. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.





Intersection of Market and Henry Streets from the NE. Pictures taken by  
Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2,  
1950.



Intersection of Market and Henry Streets from the NE. Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.

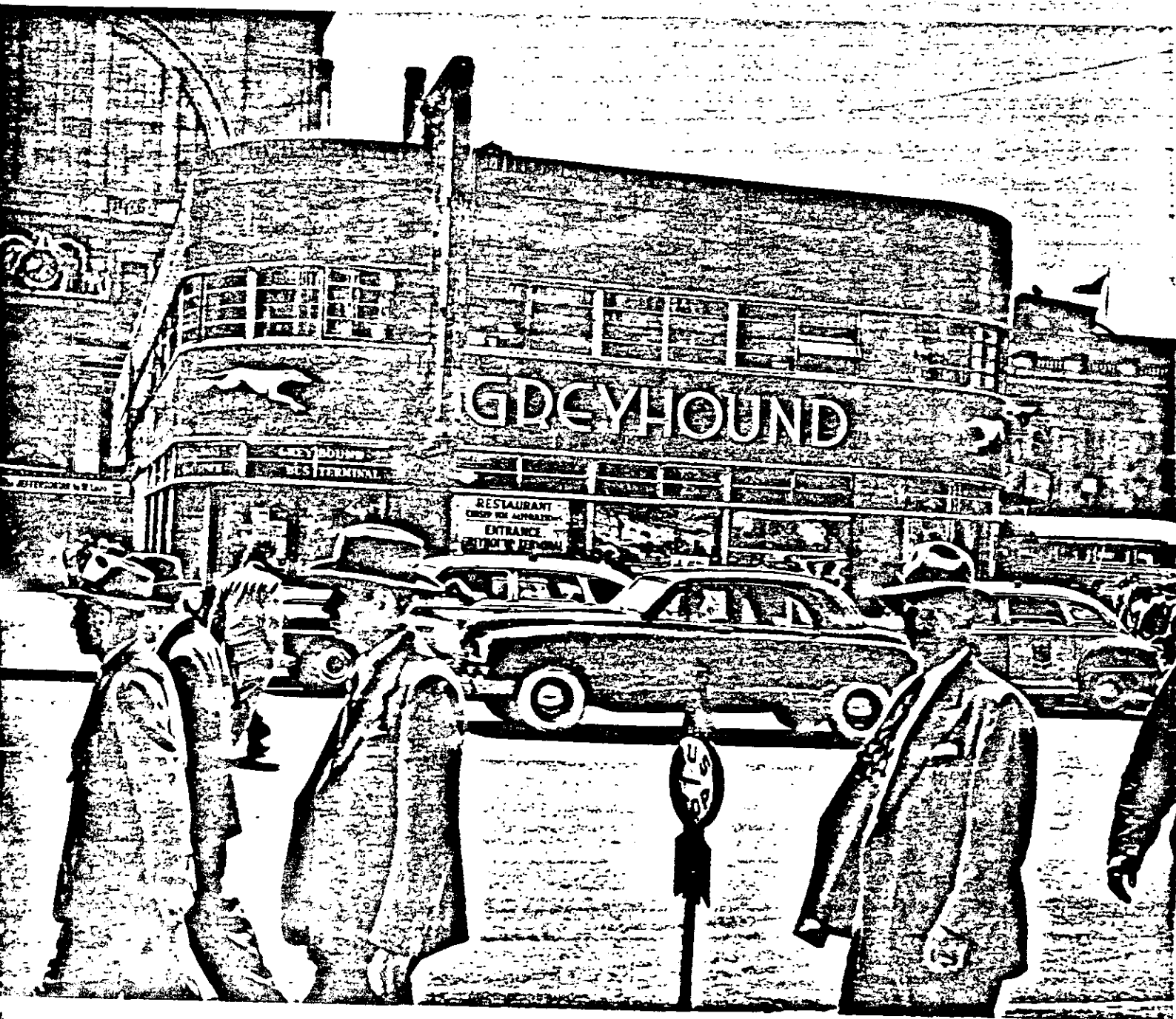


Intersection of Market and Henry Streets from the SW. Pictures taken by  
Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2,  
1950.



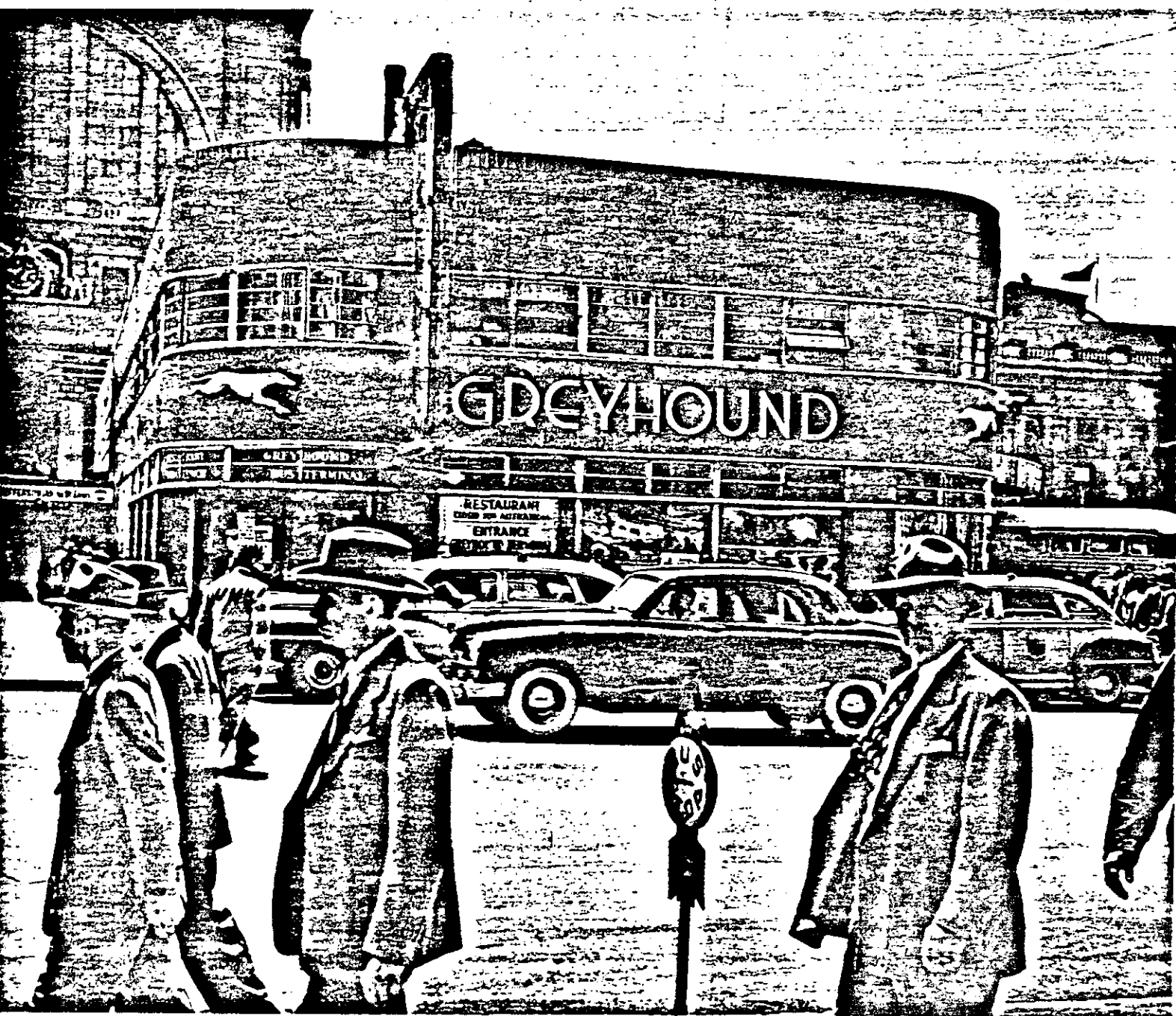
Intersection of Market and Henry Streets from the SW. Pictures taken by  
Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2,  
1950.





Greyhound terminal on south side of 34th taken from directly in front of "34th Street Cafeteria." Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.





Greyhound terminal on south side of 34th taken from directly in front of "34th Street Cafeteria." Pictures taken by Photographer Frank Schweitzer, accompanied by SA M. J. McDonagh, on June 2, 1950.